

SERVICE MANUAL



T 753

Surround Sound Receiver

T 753

Surround Sound Receiver

SAFETY INFORMATION

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THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:
(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE.
(2) THIS DEVICE MUST ACCEPT INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION.

NAD ELECTRONICS INTERNATIONAL
633 GRANITE COURT, PICKERING, ON CANADA L1W 3K1
MODEL T 753 A/V SURROUND SOUND RECEIVER
POWER RATING 120V 60Hz 6A ~
CUSTOM MANUFACTURED TO NAD SPECIFICATIONS
IN THE PEOPLE'S REPUBLIC OF CHINA

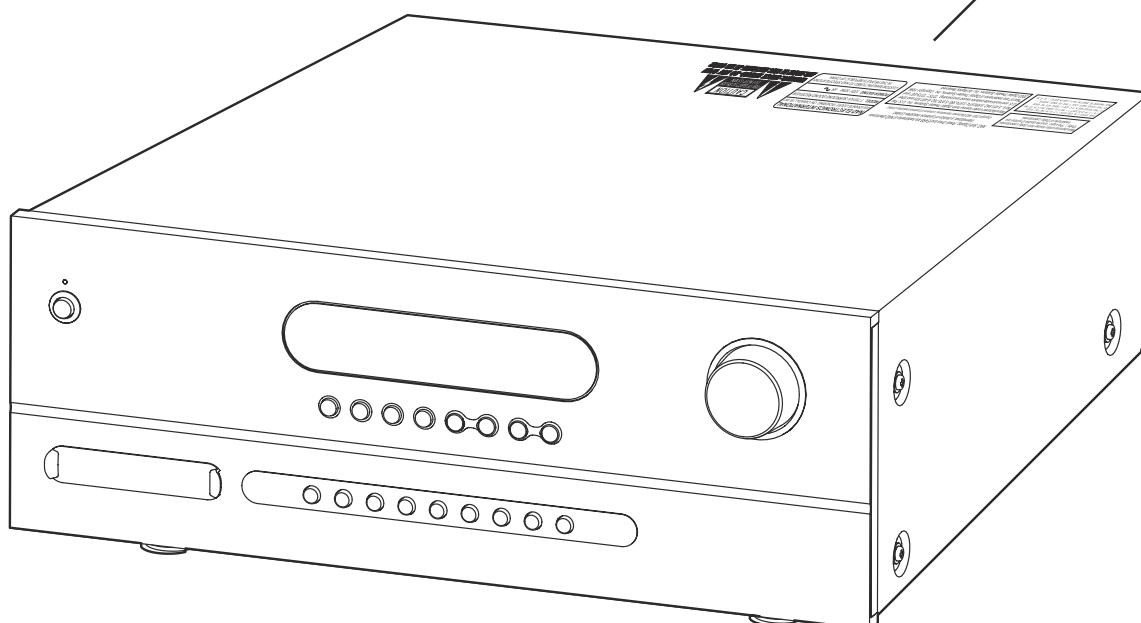
AH VERSION

NAD ELECTRONICS INTERNATIONAL
MODEL T 753 A/V SURROUND SOUND RECEIVER
POWER RATING 230V 50Hz 3A ~
CUSTOM MANUFACTURED TO NAD SPECIFICATIONS
IN THE PEOPLE'S REPUBLIC OF CHINA

C VERSION

 **CAUTION**
RISK OF ELECTRIC SHOCK
DO NOT OPEN 

WARNING: SHOCK HAZARD - DO NOT OPEN
AVIS: RISQUE DE CHOC ELECTRIQUE - NE PAS OUVRIR



SERVICE SAFETY PRECAUTIONS

1. Replacing the fuses

CAUTION:

FOR CONTINUED PROTECTION AGAINST THE RISK OF FIRE REPLACE ONLY WITH SAME TYPE OF FUSE.

Reference Designator	Part Number	Description
F751*AH	33-0191001-00-88	Fuse 10A 250V Time Lag 5x20 MM UL/CSA
F751*C	33-0181006-00-88	Fuse 6.3A 250V Time Lag 5x20 MM UL/CSA/SEMKO/VDE
F752*AH	33-0111006-00-48	Fuse 1.6A 250V Time Lag 5x20 MM UL/CSA/VDE/SEMKO
F752*C	33-0151006-00-48	Fuse 800mA 250V Time Lag 5x20 MM UL/CSA/VDE/SEMKO

NOTE:


<*AH > : USA, CANADIAN MODEL ONLY.

<*C > : EUROPEAN MODEL ONLY.

2. Safety check out

(Only U.S.A. model)

Before returning the product to the customer, make leakage current or resistance measurements to determine that exposed parts are acceptably insulated from supply circuit.

Parts marked with the symbol  are critical with regard to the risk of fire and electric shock.
Replace only with parts recommended by the manufacturer.

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SPECIFICATIONS

POWER AMPLIFIER SECTION

Rated distortion	(Rated power level into 8 ohms, THD 20 Hz-20 kHz FL/C/FR) (Rated power level into 8 ohms, THD 20 Hz-20 kHz SL/SR/BS)	$\leq 0.1 \%$ $\leq 0.1 \%$
Input Sensitivity	(ref. 8 ohms, 1 kHz)	$127 \pm 20 \text{ mV}$
S/N Ratio	(A-wtd, 1kHz, 1 W, 8 ohm, SL/SR/BL)	$\geq -72 \text{ dB}$
Frequency Response	(20 Hz - 20 kHz)	$0 \pm 1.0 \text{ dB}$
Channel Balance	(1 dB to -40 dB, 1 kHz) (-41 dB to -50 dB, 1 kHz)	$\leq 2 \text{ dB}$ $\leq 3 \text{ dB}$
Audio muting at 1 kHz		$\geq 55 \text{ dB}$
Subwoofer out, 500 mV in	(THD at 2 V O/P, 100 Hz)	$\leq 0.5 \%$
Crosstalk	(500 mV input, 10 W, 1 kHz)	$\geq -57 \text{ dB}$
Controls		
Bass	(at 500 mV in, 1 W out, 100 Hz)	$\pm 10 \text{ dB} \pm 2 \text{ dB}$
Treble	(at 500 mV in, 1 W out, 10 kHz)	$\pm 10 \text{ dB} \pm 2 \text{ dB}$

DOLBY DIGITAL SECTION

Channel Difference(FL ref. Track 30)		$\pm 1.2 \text{ dB}$
Frequency Response at Dolby config.2	SL Track 46 200 - 20 kHz	$\pm 0.8 \text{ dB}$
	SR Track 47 200 - 20 kHz	$\pm 0.8 \text{ dB}$
	C Track 44 200 - 20 kHz	$\pm 0.8 \text{ dB}$
Harmonic Distortion	(1 W, Audio LPF, Dolby Congfig 1)	FL Track 65 997 Hz $\leq 0.08 \%$
		FR Track 67 997 Hz $\leq 0.08 \%$
		SL Track 68 997 Hz $\leq 0.08 \%$
		SR Track 69 997 Hz $\leq 0.08 \%$
		C Track 66 997 Hz $\leq 0.08 \%$
S/N Ratio	(31 for O/P 1 W, Track 35)	CCIR / ARM $\geq 65 \text{ dB}$
		Audio LPF $\geq 70 \text{ dB}$
		A-wtd $\geq 70 \text{ dB}$
Channel Separation	(1 W, 20 kHz LPF)	Track 65 997 Hz $\geq 60 \text{ dB}$

DOLBY PRO LOGIC II SECTION

Frequency Response

I/P mode : L, R	: 1 V in, 1 W, Ch L/R	40 Hz	$0 \pm 2.0 \text{ dB}$
		20 Hz	$0 \pm 2.0 \text{ dB}$
I/P mode : L=R	: 1 V in, 1 W, Ch /L/R	40 Hz	$0 \pm 2.0 \text{ dB}$
	Ch C	20 kHz	$0 \pm 2.0 \text{ dB}$
I/P mode : L=-R	: 1 V in, 1 W, Ch SL/SR	40 Hz	$0 \pm 2.0 \text{ dB}$
		20 kHz	$0 \pm 2.0 \text{ dB}$
S/N Ratio (200 mV in, 1 W, A-WTD w/ 1 k termination)			
I/P mode : L, R	: 1 kHz, Ch L/R		$\geq 65 \text{ dB}$
I/P mode : L=R	: 1 kHz, Ch C		$\geq 65 \text{ dB}$
I/P mode : L=-R	: 1 kHz, Ch SL/SR		$\geq 65 \text{ dB}$
THD (2.2 V in, 1 W, w/ 80 kHz LPF, 1 kHz)			$\leq 0.2 \%$

DTS SECTION

Output Level (Vol 0 dB) : FL/FR/C/SL/SR	Track 6 1 kHz	0.3 ± 1.3 W
Channel Difference (FL ref): FL/FR/C/SL/SR	Track 6 1 kHz	± 1.0 dB
Harmonic Distortion (Audio Filter) : FL/FR/C/SL/SR	Track 10-14 1 kHz	≤ 0.08 %
Frequency Response (20 Hz to 20 kHz)	Track 26-30	+2/-1.5
Subwoofer Output Level 1 kHz ref at pre-out (FL)	Play Track 10, charge to 15	12.5 ± 1.5 dB

AM TUNER SECTION

Input level is expressed as the reading in open circuit
of 75-ohm source impedance signal generator

Usable sensitivity (999/1000 kHz)	≤ 30 dBuV
S/N Ratio (5 mV in)	≥ 38 dB
THD (5 mV in)	≤ 3 %
IF Rejection (450 kHz)	≤ 36 dB
Image Rejection (F+2xIF)	≥ 28 dB
Selectivity	≥ 17 dB
Output	170 -20/+30 mV
Loop sensitivity (20 dB S/N)	
999/1000 kHz	≤ 66 dB
603/600 kHz	≤ 66 dB
1404/1400 kHz	≤ 66 dB
Frequency Response (100 - 2.3 kHz, 5 mV)	± 6 dB

FM TUNER SECTION

***C**

***AH**

Input level is expressed as the reading in open circuit
of 75-ohm source impedance signal generator

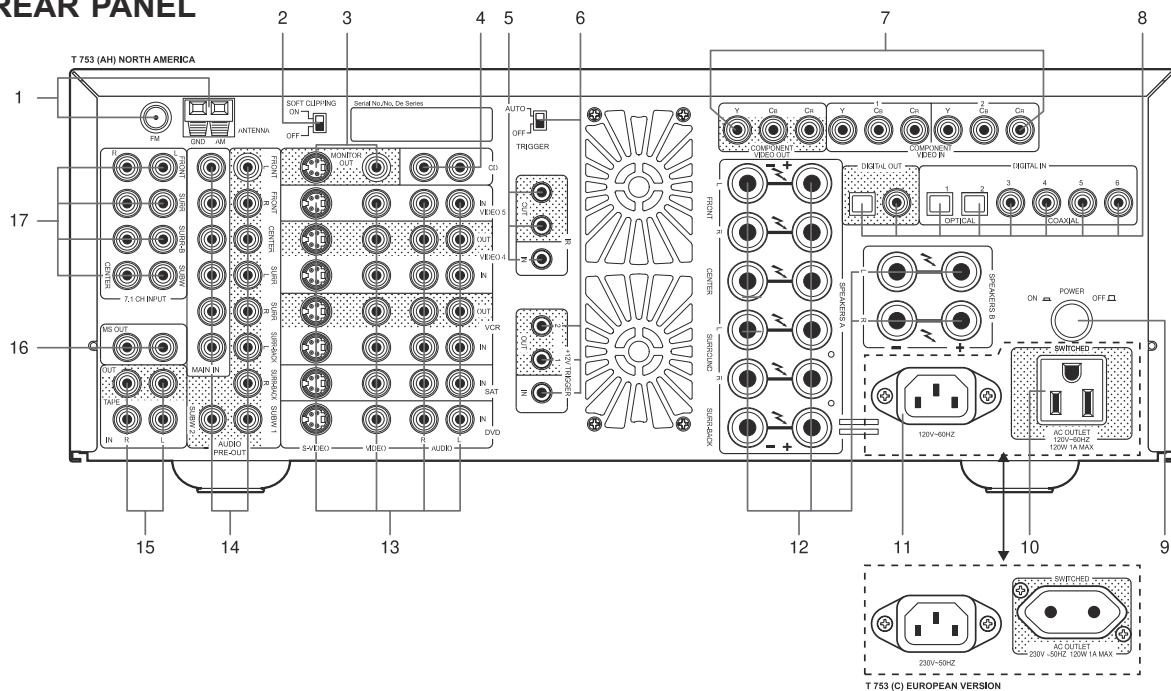
Usable sensitivity (98 MHz)		≤ 15 dBμV	≤ 15 dBuV
S/N Ratio (60 dB, IHF wtd)	Mono	≥ 63 dB	≥ 63 dB
	Stereo	≥ 63 dB	≥ 63 dB
Frequency Response (20 Hz - 15 kHz, 60 dBμ)		0 ± 1.5 dB	0 ± 1.5 dB
Channel Separation (60 dBμ)	100 Hz	≥ 30 dB	≥ 30 dB
	1 k	≥ 38 dB	≥ 38 dB
	10 kHz	≥ 30 dB	≥ 30 dB
Alternate Channel Selectivity (40 dBμ, ± 400 kHz)		≥ 60 dB	≥ 45 dB
Capture Ratio (40 dBμ)		≤ 3 dB	≤ 3 dB
AM Suppression (60 dBμ, 100% Mod. FM, 30% Mod. AM)		≥ 48 dB	≥ 48 dB
Image Rejection (119.4 MHz)		≥ 65 dB	—
I.F. Rejection (10.7 MHz)		—	≥ 78 dB
Pilot Suppression (98 MHz)		≥ 60 dB	≥ 60 dB
THD (60 dBμ, L=R 75 kHz for AH, 40 kHz Dev for C)	Mono	≤ 0.25 %	≤ 0.25 %
	Stereo	≤ 0.35 %	≤ 0.35 %
Auto-Search Sensitivity	On	≥ 24 dBμ	≥ 24 dBμ
	Off	≤ 15 dBμ	≤ 15 dBμ
RDS decode Sensitivity		≤ 26 dBμ	—

PHYSICAL SPECIFICATIONS

Dimensions (Width x Height x Depth)	435 x 170 x 423 mm
Net Weight	20.50 Kg (45.10 lbs)
Shipping Weight	24.0 Kg (52.80 lbs)

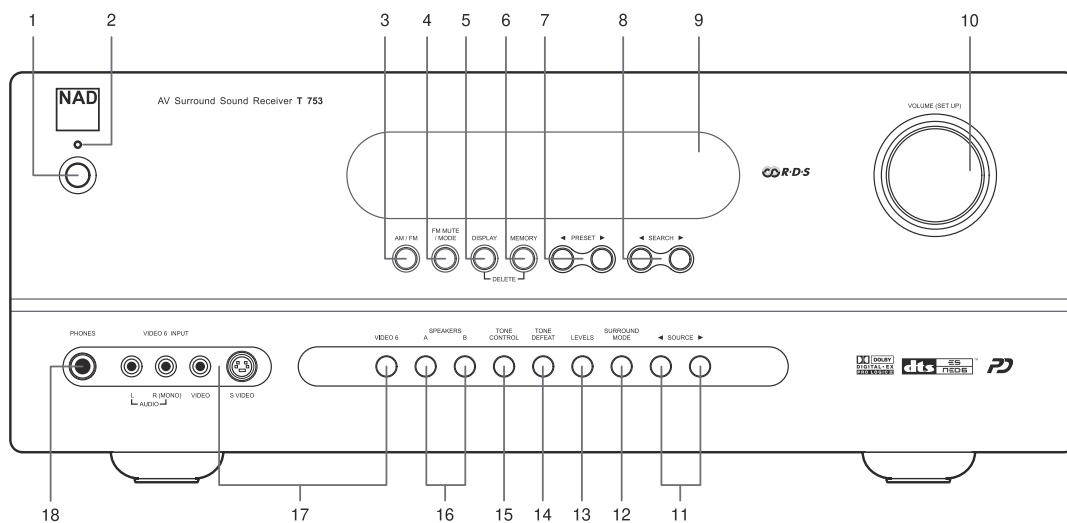
REAR PANEL / FRONT PANEL VIEW

REAR PANEL



- | | |
|---|--|
| 1. FM & AM ANTENNA | 9. POWER SWITCH |
| 2. SOFT CLIPPING ON/OFF | 10. SWITCHED AC OUTLETS |
| 3. MONITOR OUT | 11. AC POWER INLET |
| 4. CD INPUT | 12. SPEAKERS A & B |
| 5. IR INPUT & OUTPUT | 13. DVD, SAT, VCR, VIDEO 4 & VIDEO 5 |
| 6. +12V TRIGGER INPUT & OUTPUT | 14. MAIN IN / AUDIO PRE-OUTS / SUBWOOFER OUT |
| 7. COMPONENT VIDEO IN & COMPONENT VIDEO OUT | 15. TAPE INPUT & OUTPUT |
| 8. DIGITAL AUDIO INPUT & DIGITAL AUDIO OUTPUT | 16. MS OUT (MULTISOURCE OUT) |
| | 17. 7.1 CH. INPUTS |

FRONT PANEL



- | | | |
|-------------------|----------------------|--------------------|
| 1. STANDBY SWITCH | 7. PRESET DOWN / UP | 13. LEVELS |
| 2. STANDBY LED | 8. SEARCH DOWN / UP | 14. TONE DEFEAT |
| 3. AM / FM | 9. VFL DISPLAY | 15. TONE CONTROLS |
| 4. FM MUTE / MODE | 10. VOLUME (SETUP) | 16. SPEAKERS A & B |
| 5. DISPLAY | 11. SOURCE DOWN / UP | 17. VIDEO 6 INPUT |
| 6. MEMORY | 12. SURROUND MODE | 18. PHONES |

DISASSEMBLY INSTRUCTIONS

1. Remove machine screws M4.0 x 8.0 (1 to 6) from the side panels.
Remove tapping screw 3.0 x 8.0 (7 to 10) from the back panel.
Refer to **Figure No. 1**.

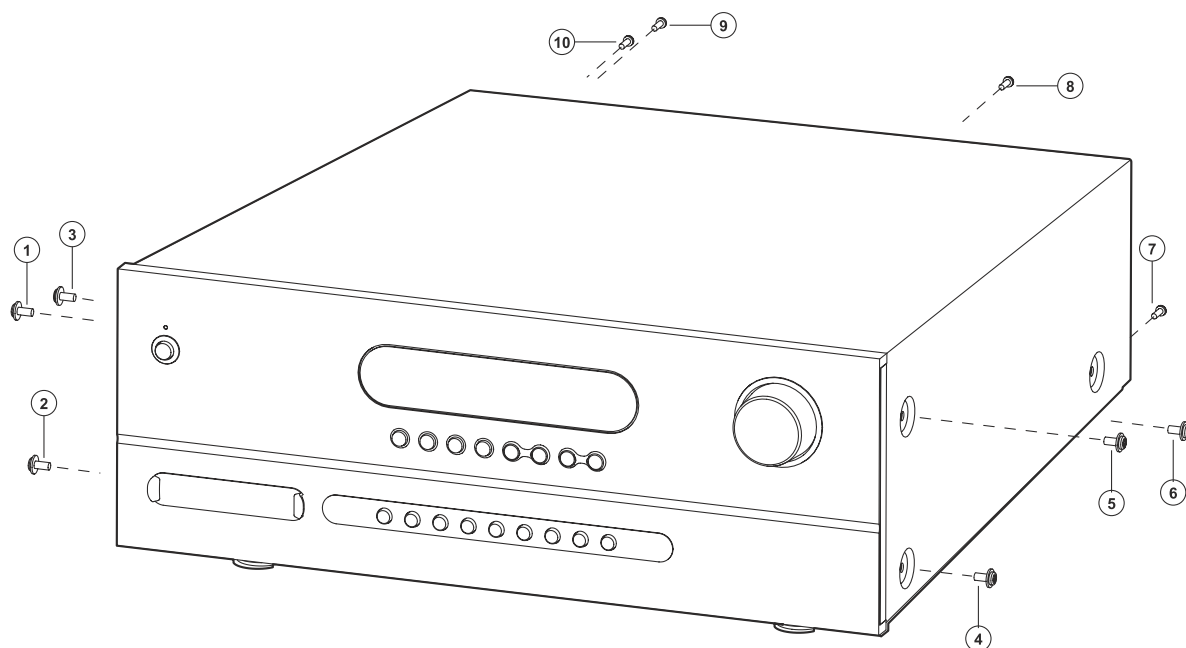


Figure No. 1

2. Pull both sides of the TOP COVER slightly outwards **11** and tilt approx. 35 ° and then remove in the direction as indicated by the arrow **12**. Refer to **Figure No. 2**.

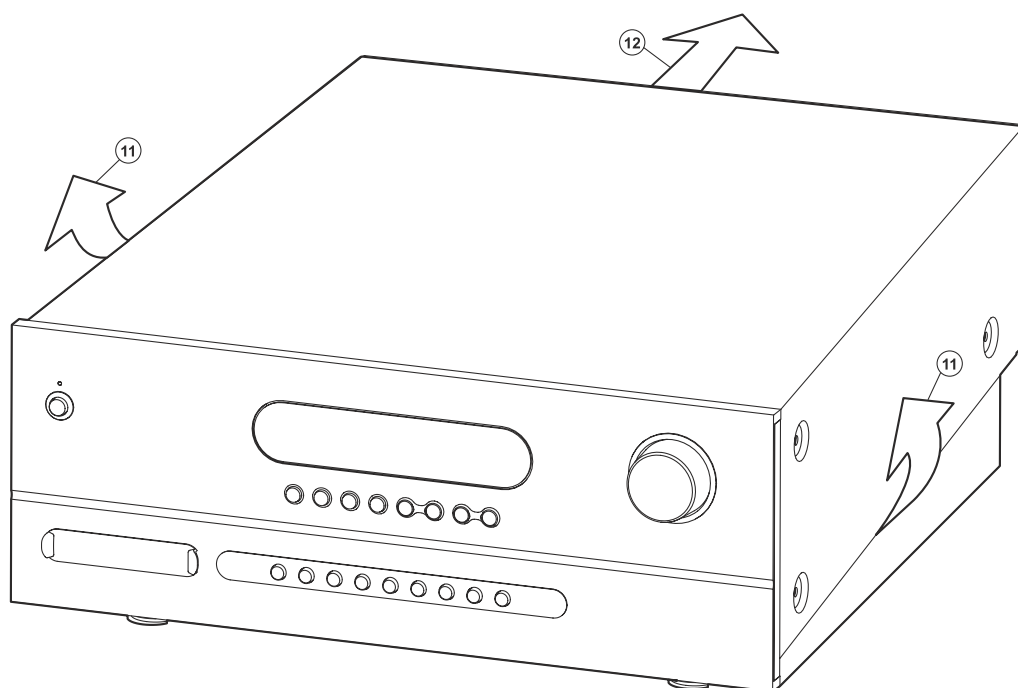
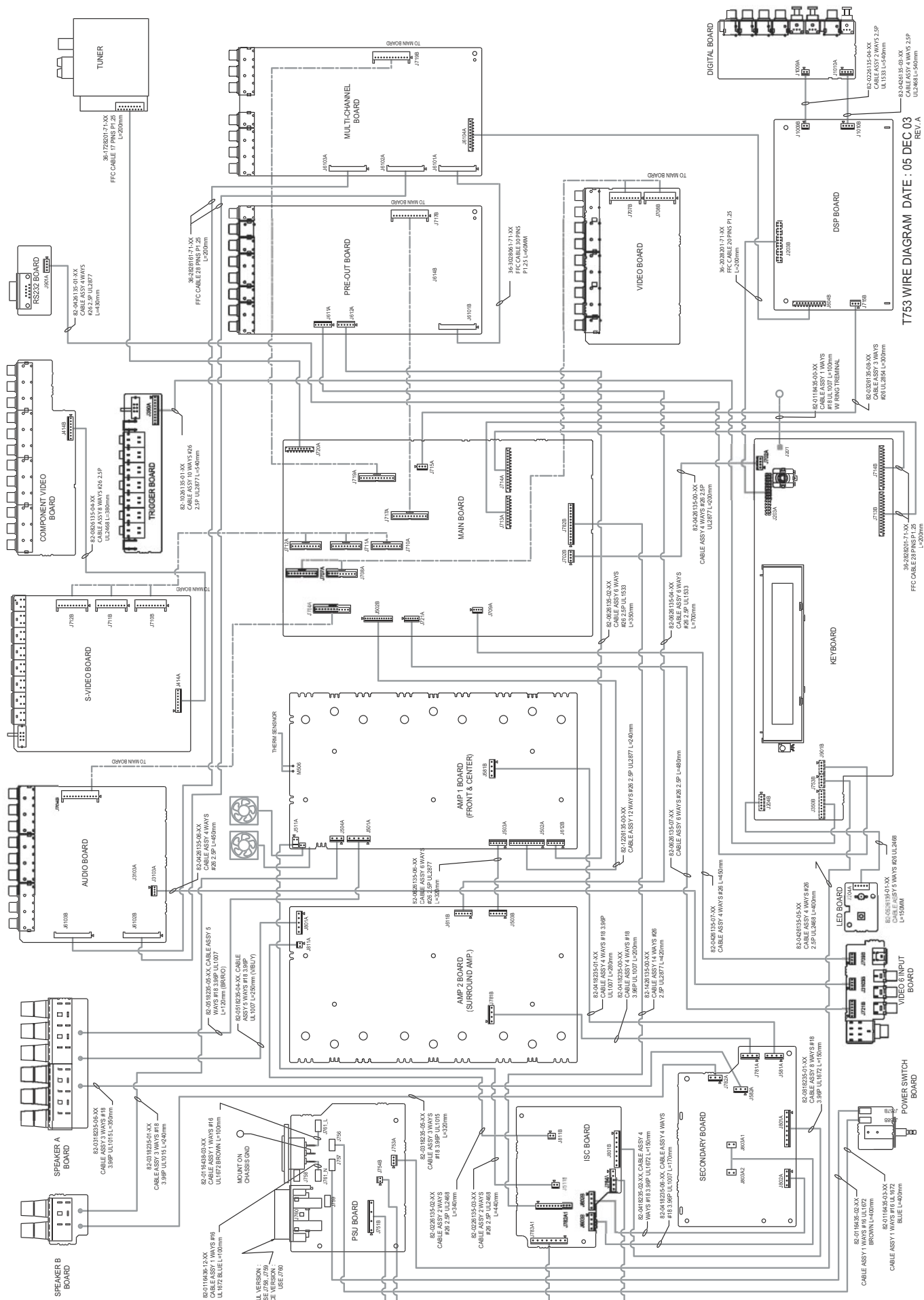


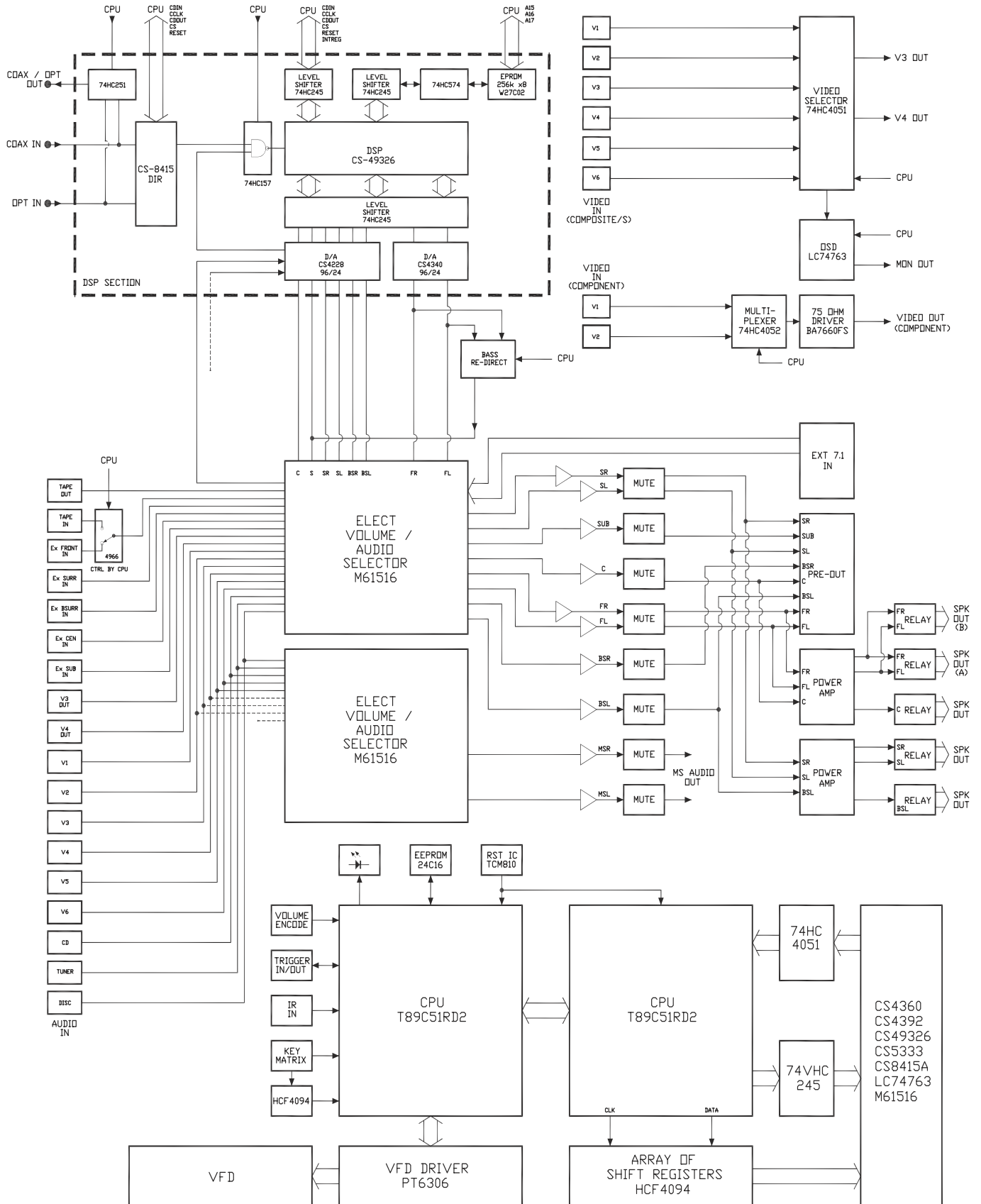
Figure No. 2

WIRING DIAGRAM



T753 WIRE DIAGRAM DATE : 05 DEC 03
REV. A

BLOCK DIAGRAM



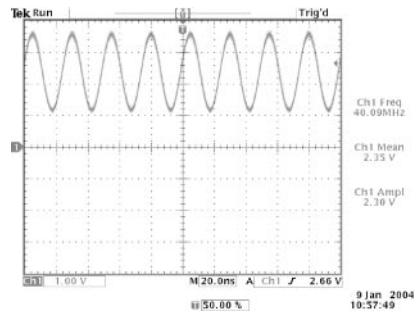
T753 Block Diagram
Issue : 01

SPECIAL FUNCTION

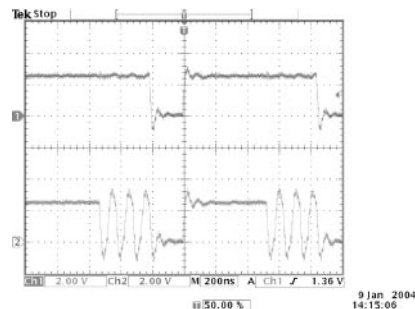
FEATURE	KEYS PRESS ON FRONT PANEL
RESET FOR AH VERSION	VIDEO 6 +SOURCE UP
RESET FOR C VERSION	VIDEO 6 + SOURCE DOWN
NTSC / PAL SELECTION	VIDEO + MEMORY
VFD ALL DISPLAY	AUDIO 6 + TONE DEFEAT
AM FREQ. STEP	AM/FM + FM MUTE

DETAILS & WAVEFORMS ON SYSTEM TEST & DEBUGGING

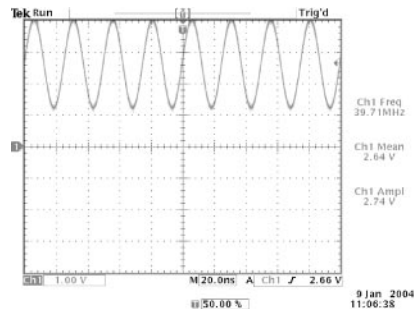
M6759(U202) main clock is at 40MHz(X202)



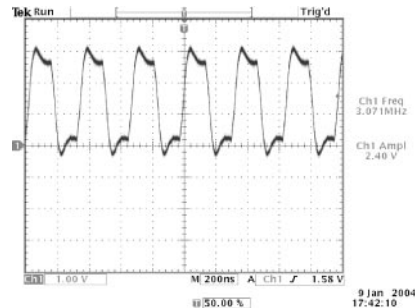
UPPER - OUTPUT ENABLE(pin 24) of EPROM (W27C02) when changing SURROUND MODES
LOWER - CHIP ENABLE(pin 22) of EPROM (W27C02) when changing SURROUND MODES



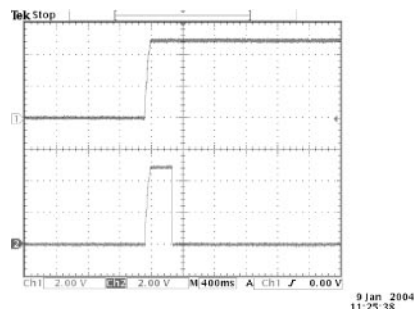
M6759(U201) main clock is at 40MHz(X201)



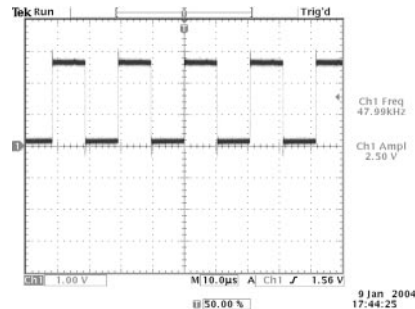
SCLK (pin 43 of CS49326)



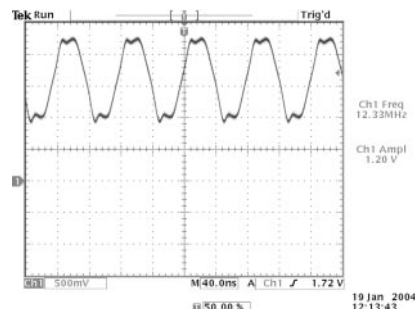
UPPER - +5V supply to KEYBOARD when power up
LOWER - RESET line (TCM810LENB713) when power up



LRCLK (pin 42 of CS49326)



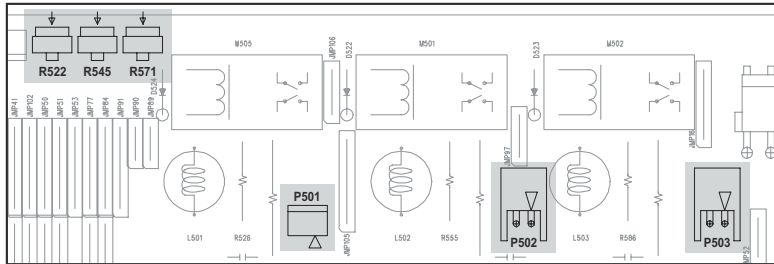
MCLK (pin 30 of CS49326)



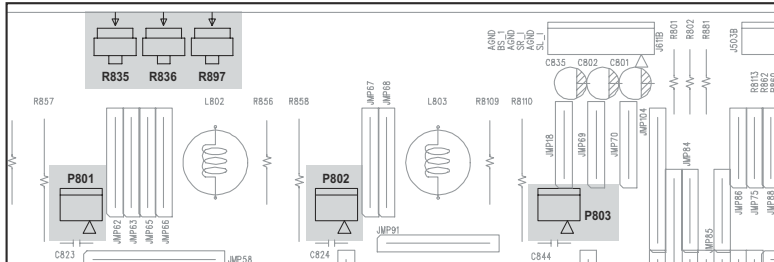
NOTE: The waveforms are based on software version V1.27.

ADJUSTMENT POINT DIAGRAM

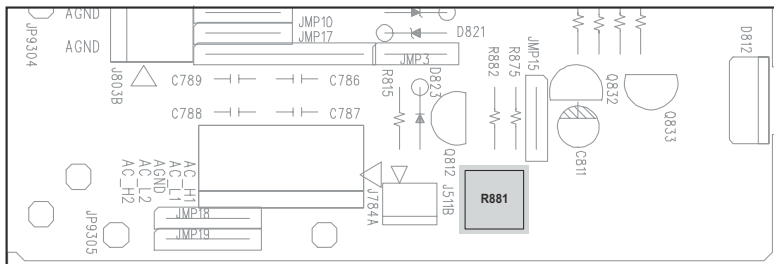
FRONT / CENTER AMPLIFIER BOARD



SURROUND AMPLIFIER BOARD



SECONDARY / ISC BOARD



AMPLIFIER ADJUSTMENT

Idle Current

1. Rotate R522 fully clockwise.
2. Connect DC millivoltmeter to P501 (i.e. Across half of R523, 0.22 Ohm resistor).
3. Turn on the unit.
4. Adjust R522 for 1mV reading on voltmeter.
5. Leave power on for at least 5 min, and check for idle current again.
6. Repeat for other channels.

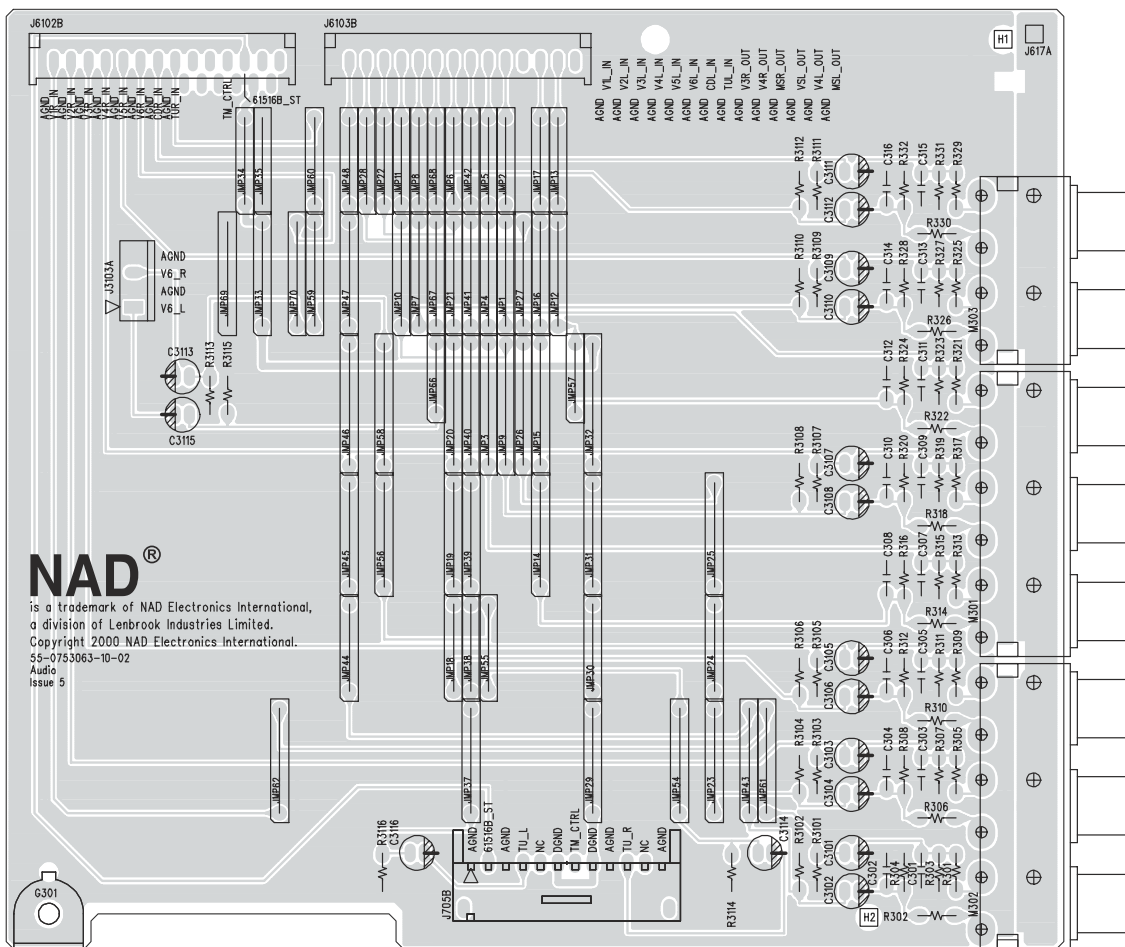
CHANNEL	JUMPER	VR
FL	P501	R522
FR	P502	R545
C	P503	R571
SL	P801	R835
SR	P802	R836
BS	P803	R897

ISC Sensitivity

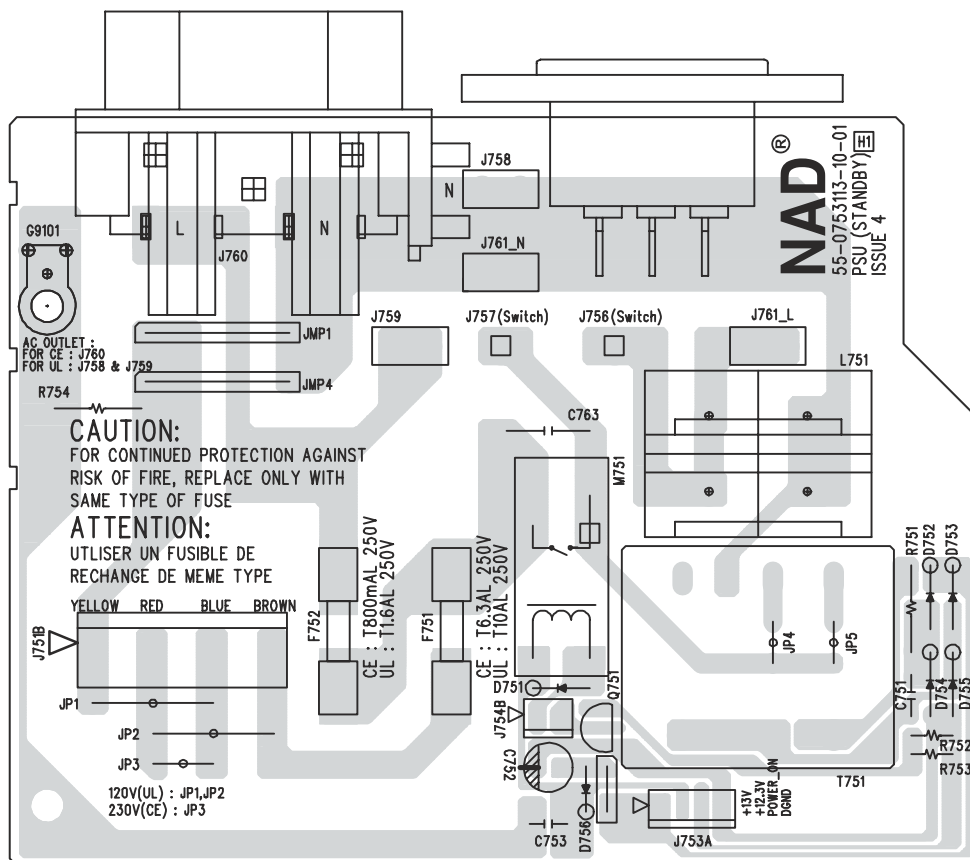
1. Connect 8 ohm loading to all channels.
2. Rotate R881 fully clockwise.
3. Load all channels at full power using 1kHz sine wave.
4. At this time, monitor the THD of the SL,SR,BS output. Clipping should occur before full power achieved.
5. Rotate R834 counter-clockwise slowly until the THD just below 0.1%.
6. Repeat step 2-5 for R834 but monitor FL, FR & Center output.
7. The procedure is finish at this step.
8. Load all channels at full power using 1kHz sine wave with 4 ohm load.
9. The clipping power(at THD 0.1%) should less than 85W.

PCB LAYOUT

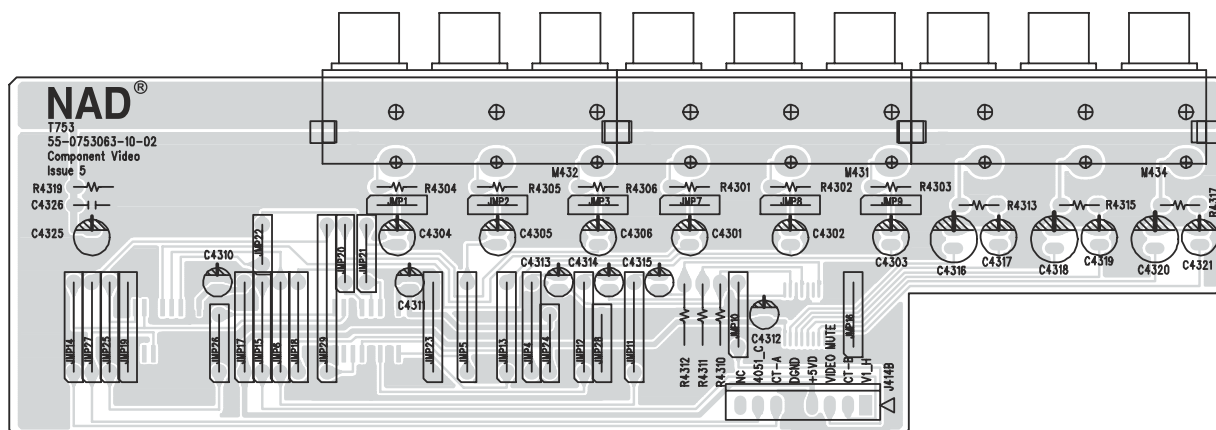
AUDIO BOARD



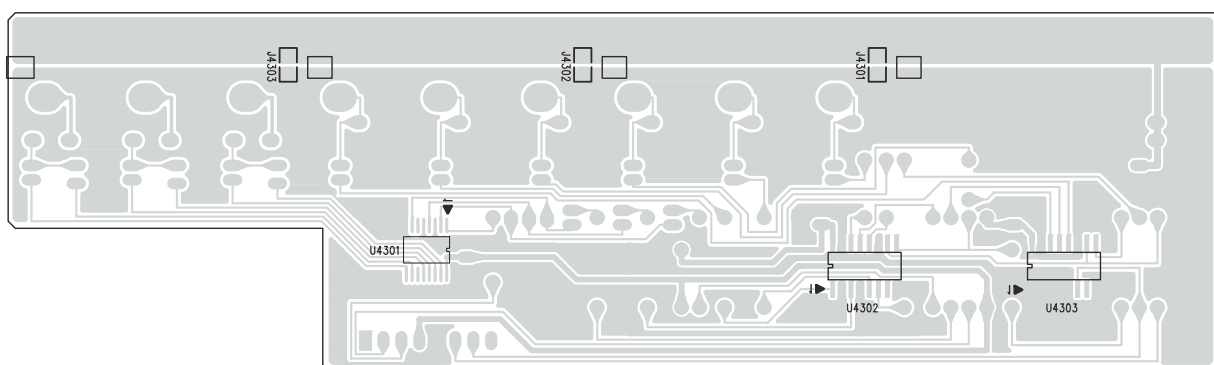
POWER SUPPLY (STANDBY) BOARD



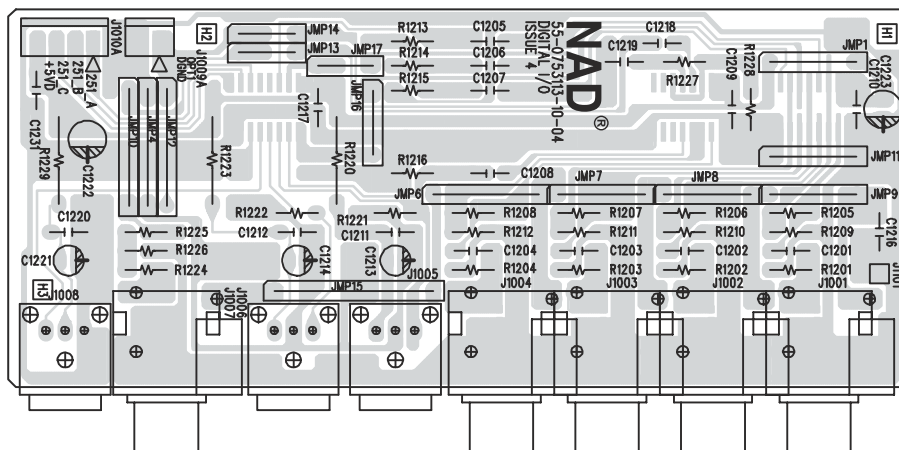
COMPONENT VIDEO BOARD - COMPONENT SIDE



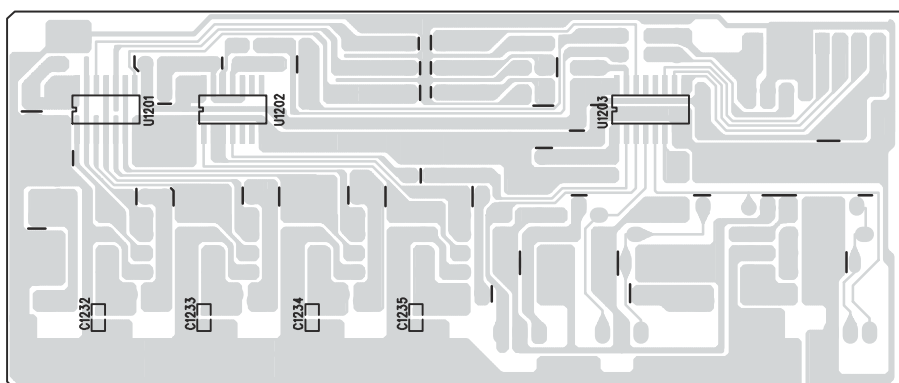
COMPONENT VIDEO BOARD - COPPER SIDE



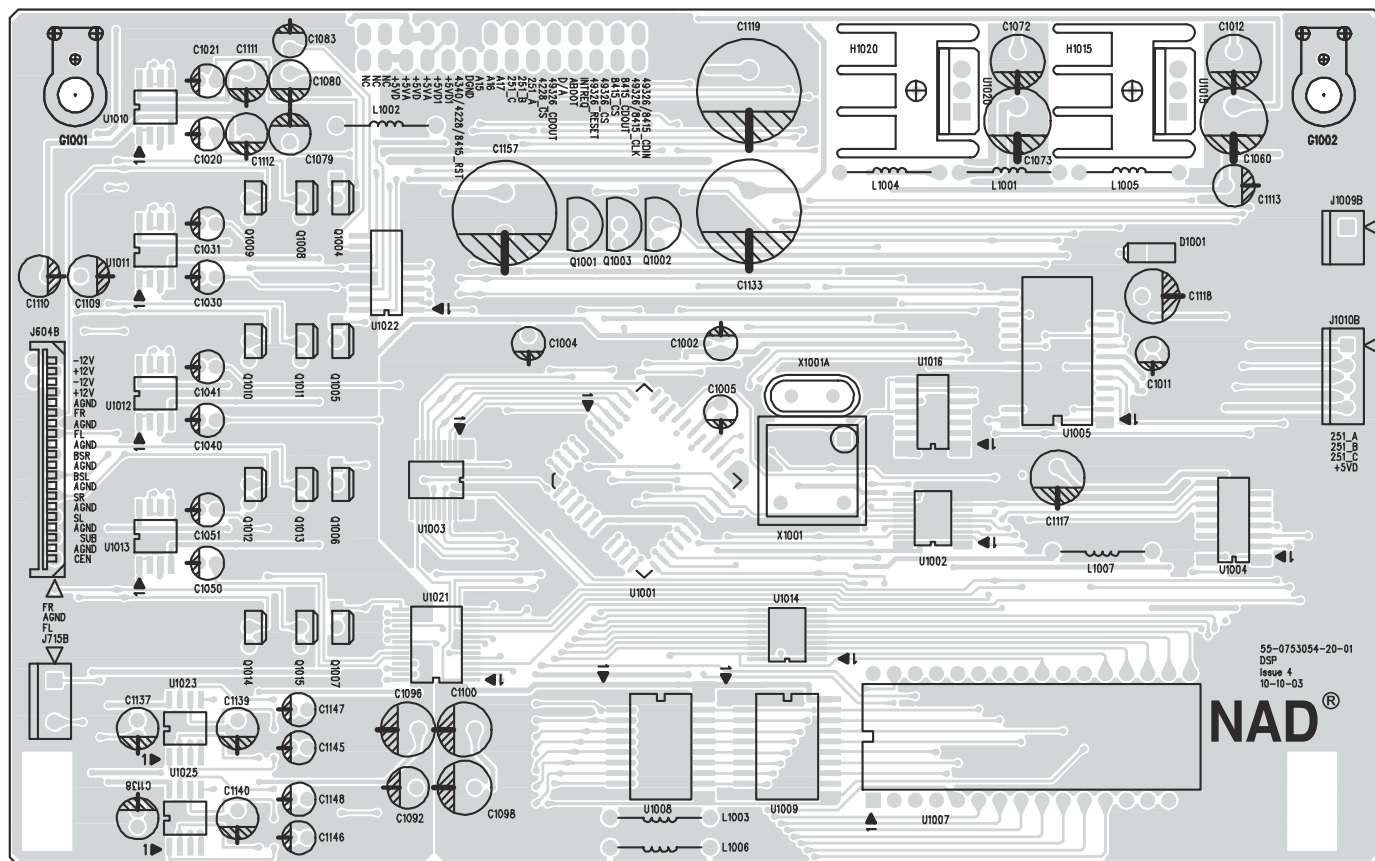
DIGITAL BOARD - COMPONENT SIDE SIDE



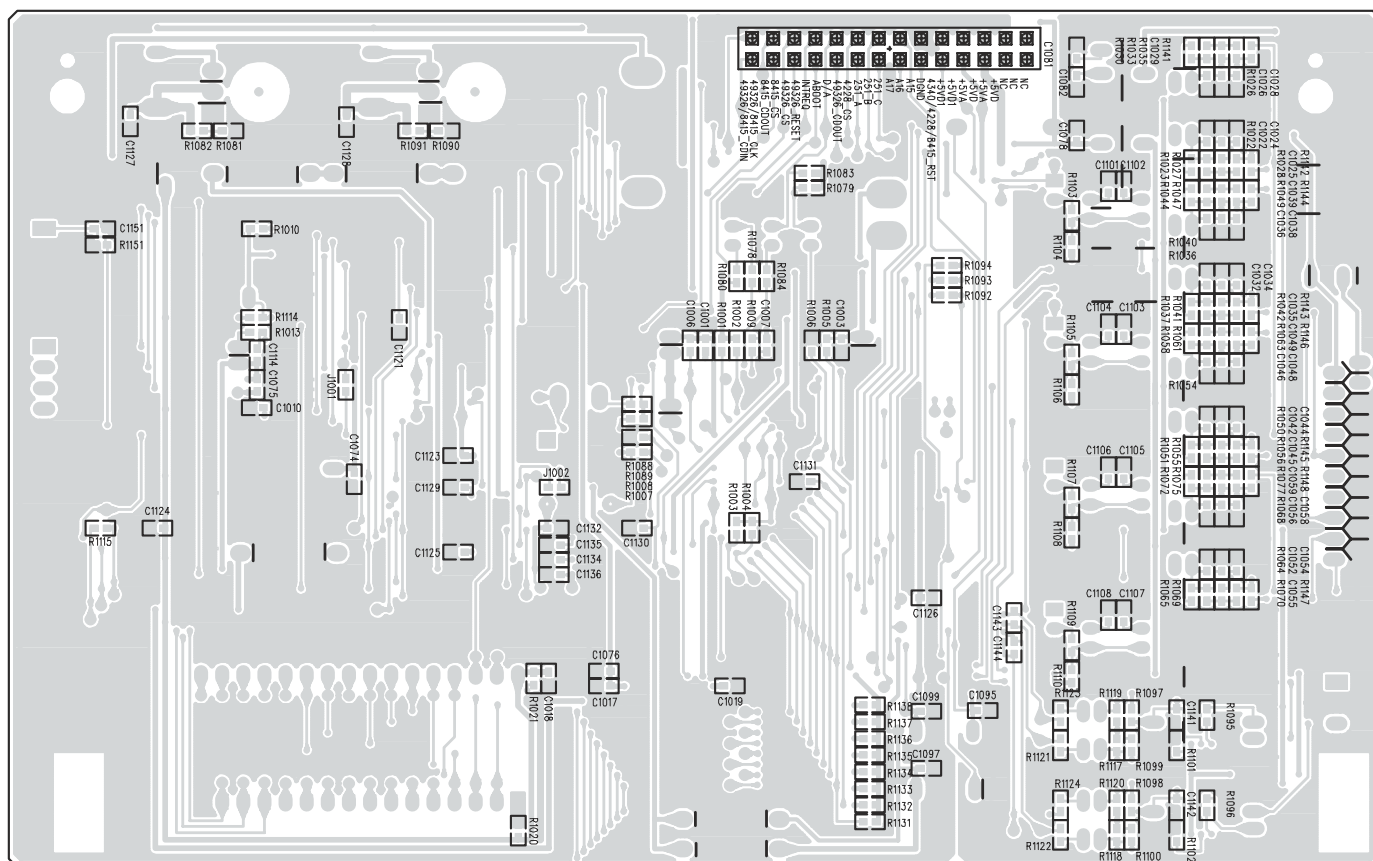
DIGITAL BOARD - COPPER SIDE



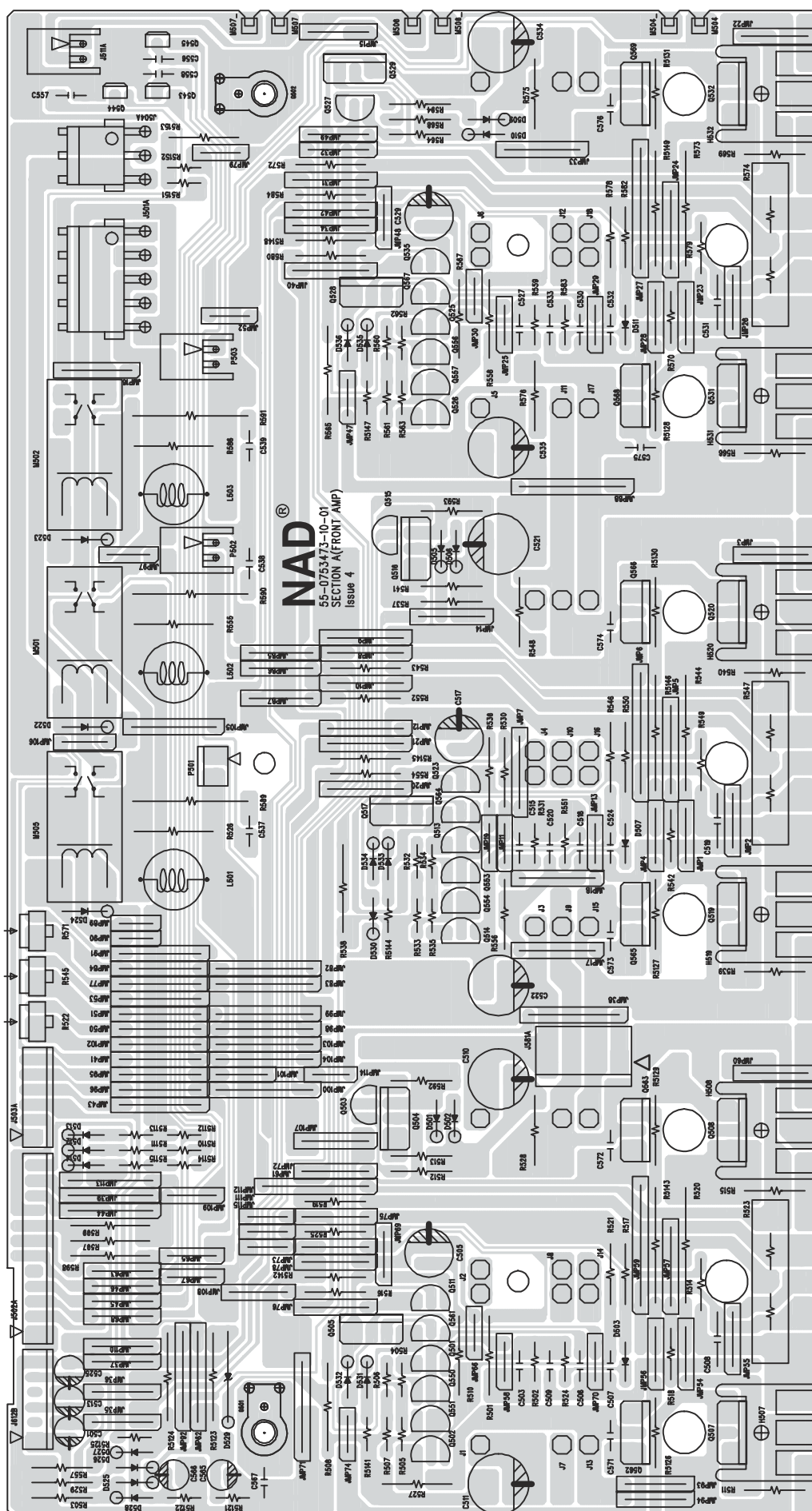
DSP BOARD - COMPONENT SIDE



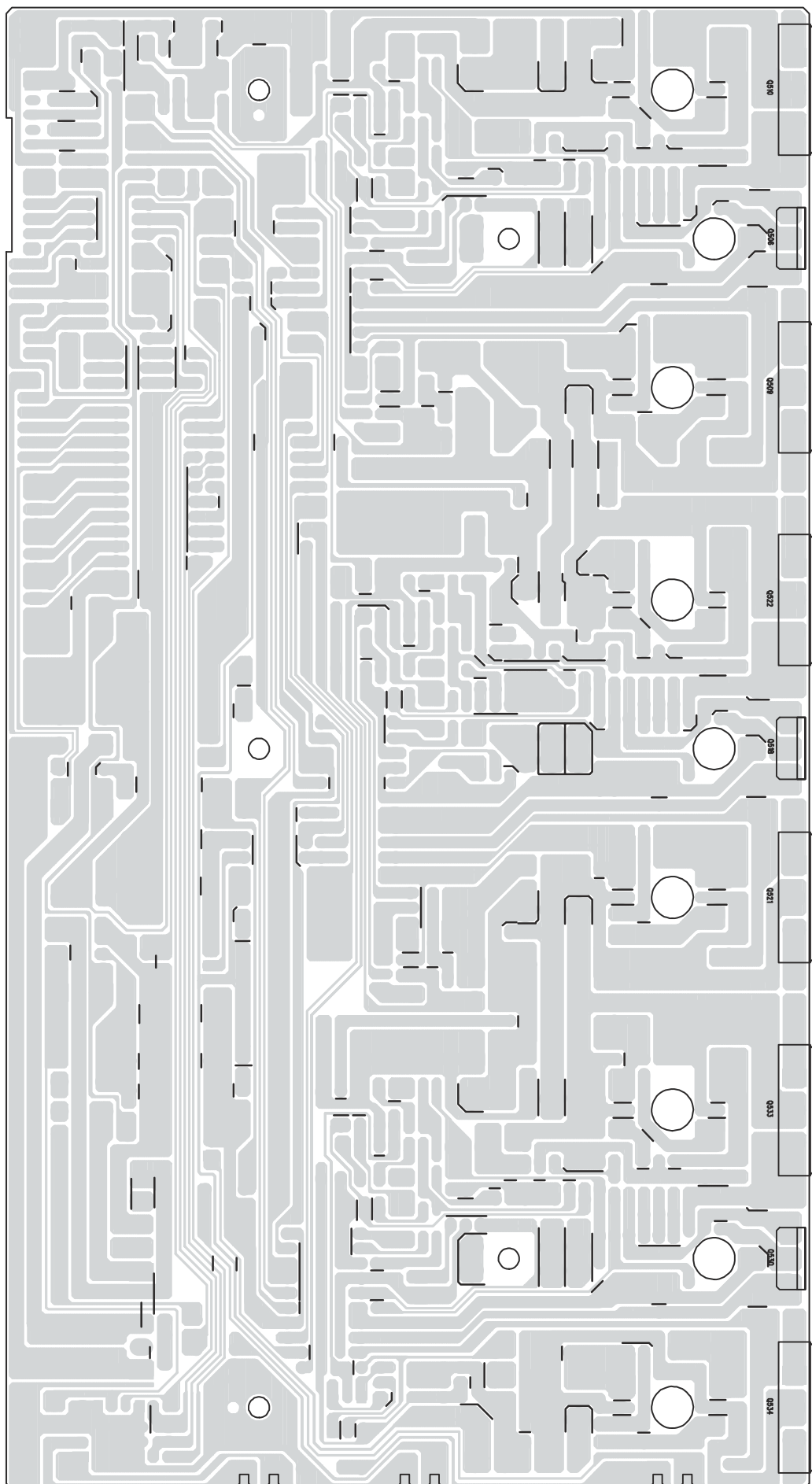
DSP BOARD - COPPER SIDE



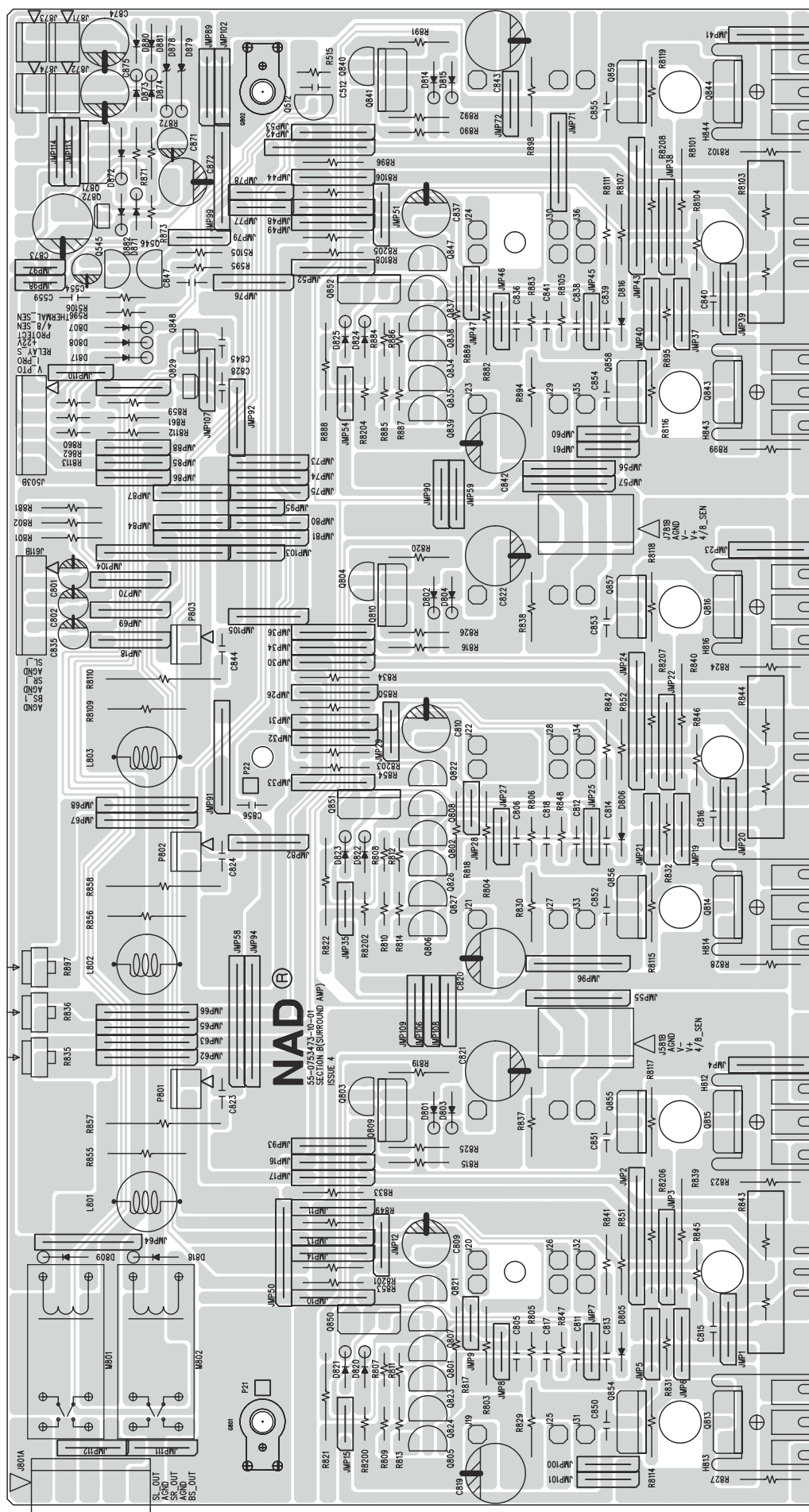
FRONT / CENTER AMPLIFIER BOARD - COMPONENT SIDE



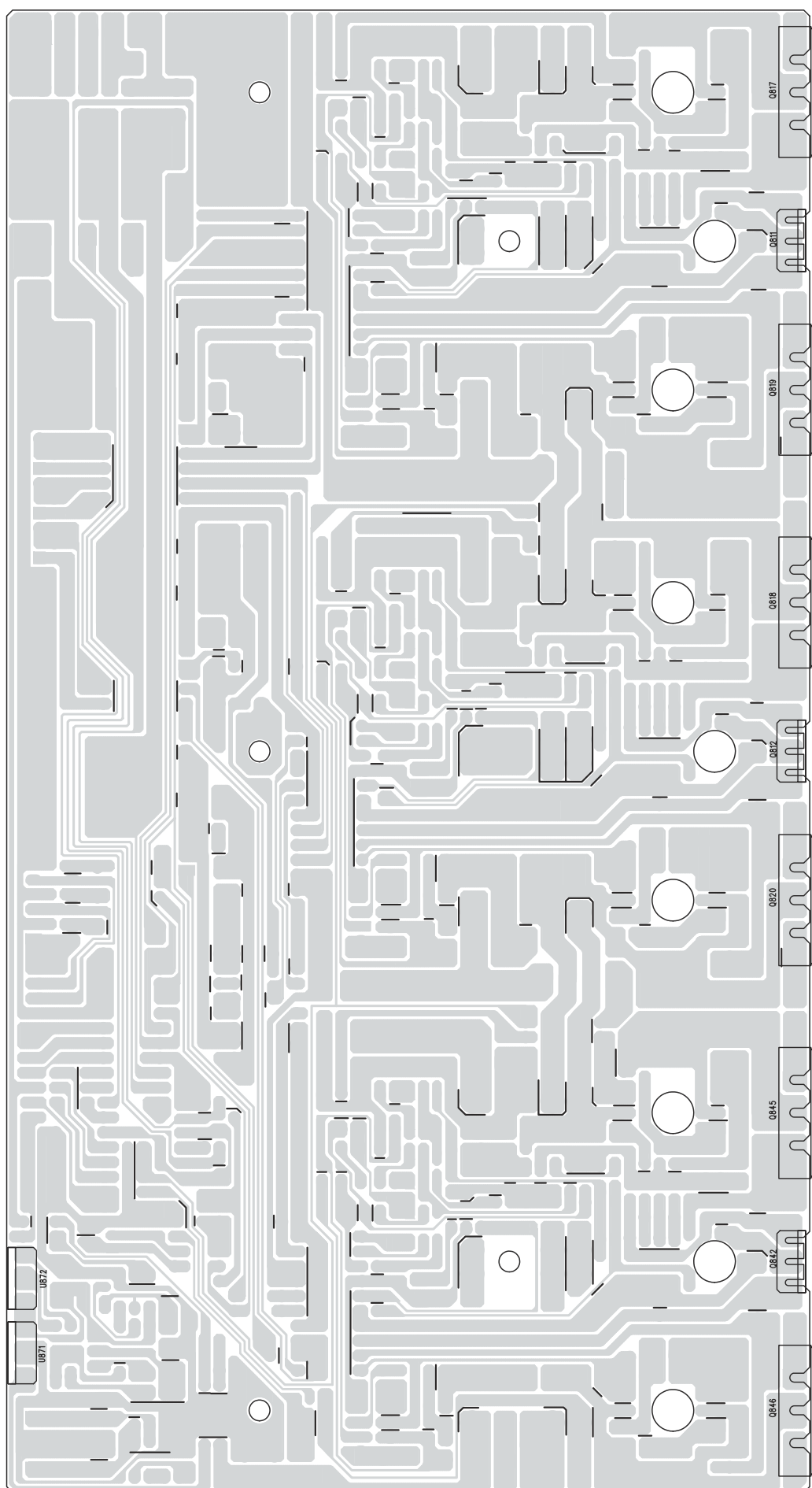
FRONT / CENTER AMPLIFIER BOARD - COPPER SIDE



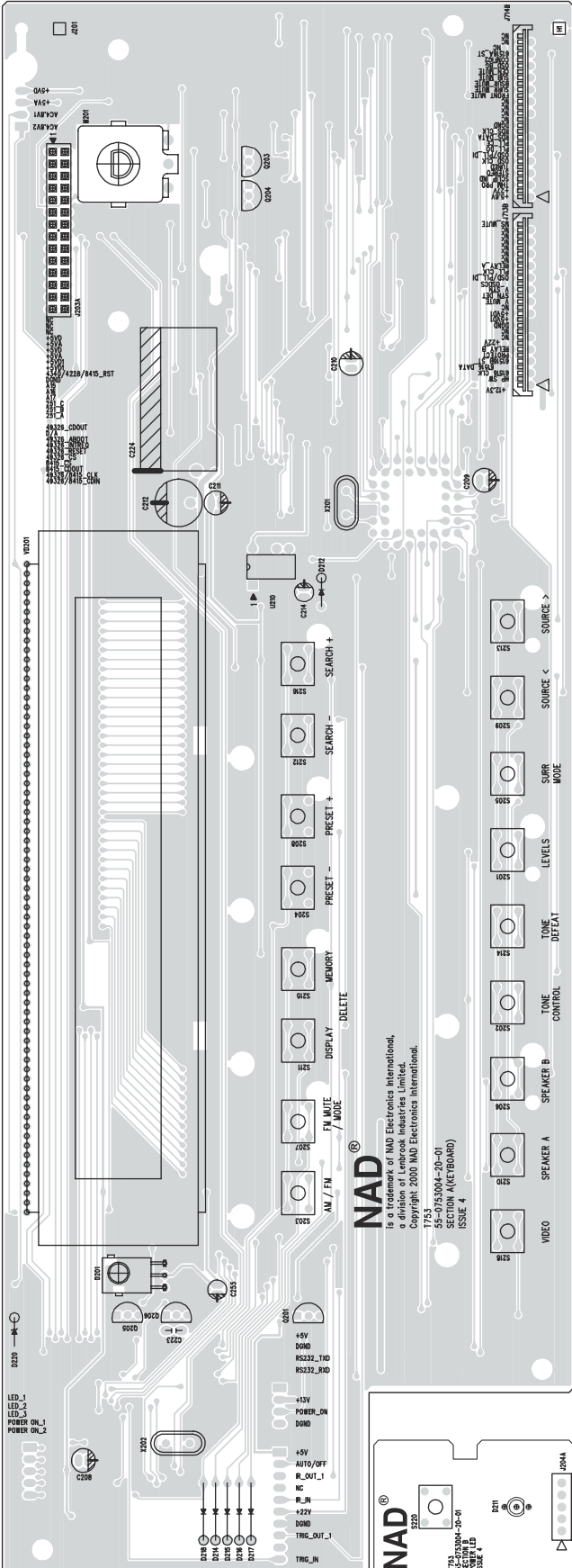
SURROUND AMPLIFIER BOARD - COMPONENT SIDE



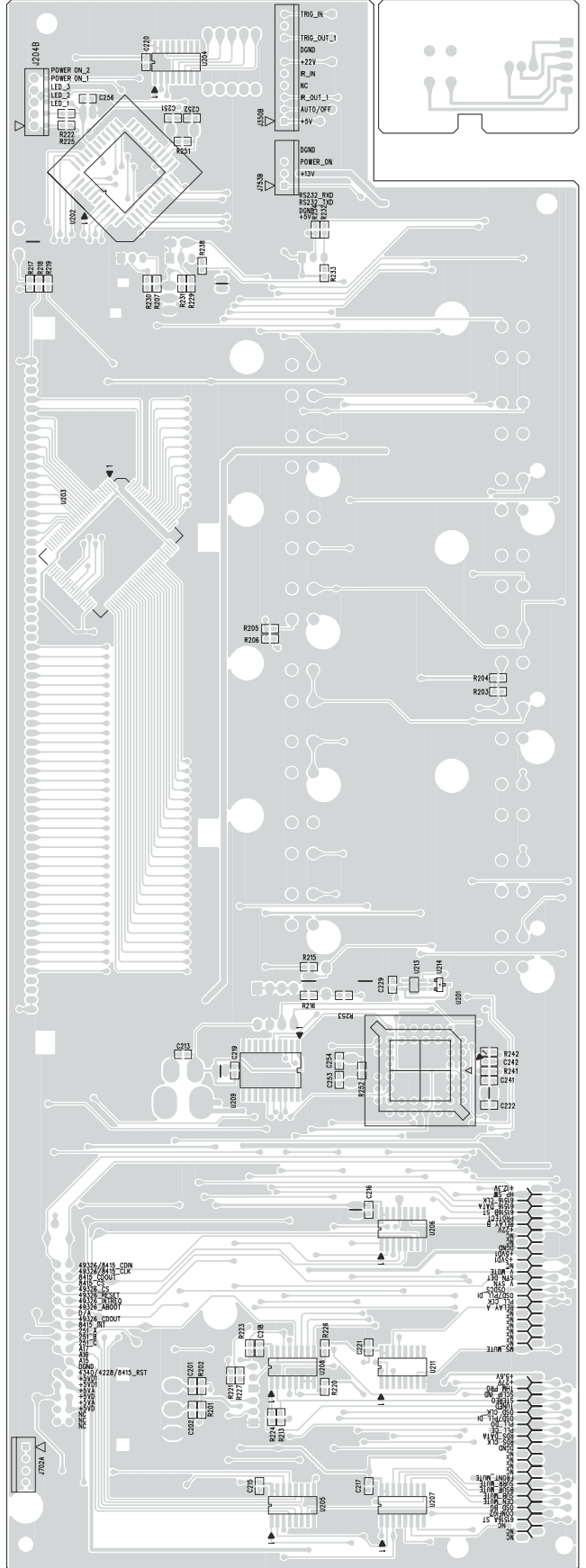
SURROUND AMPLIFIER BOARD - COPPER SIDE



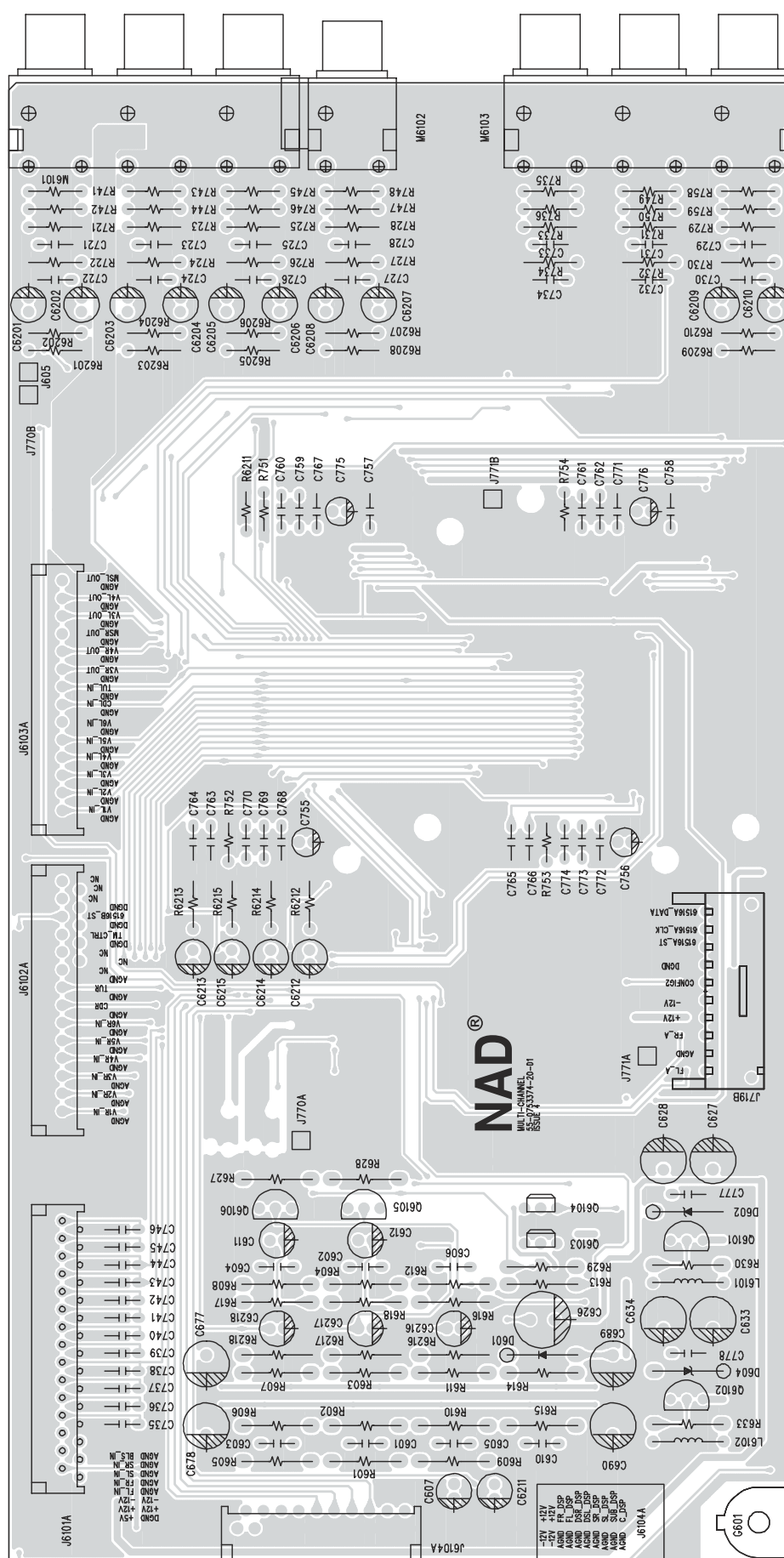
KEY BOARD/POWER SWITCH - COMPONENT SIDE



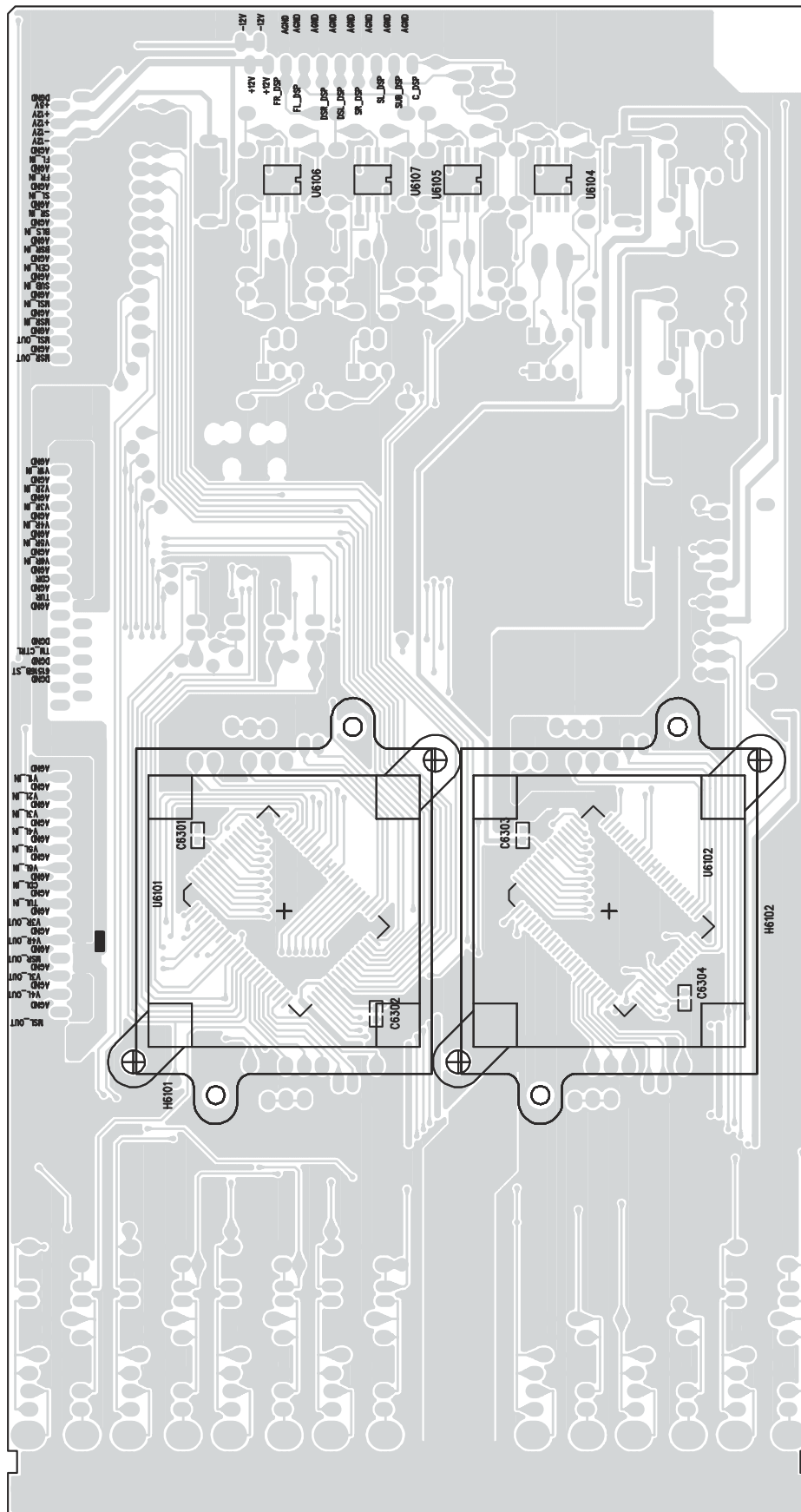
KEY BOARD/POWER SWITCH - COPPER SIDE



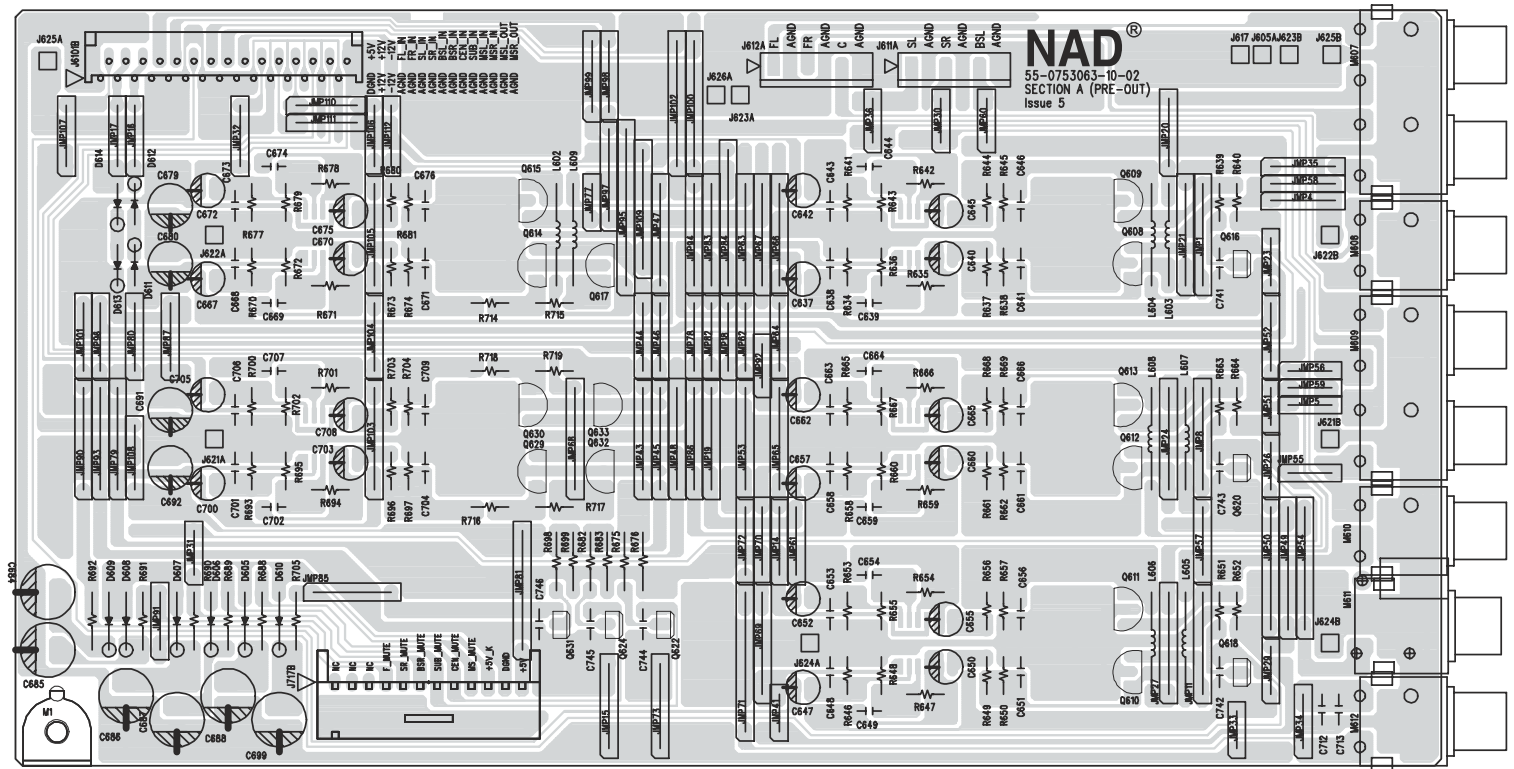
MULTI-CHANNEL BOARD - COMPONENT SIDE



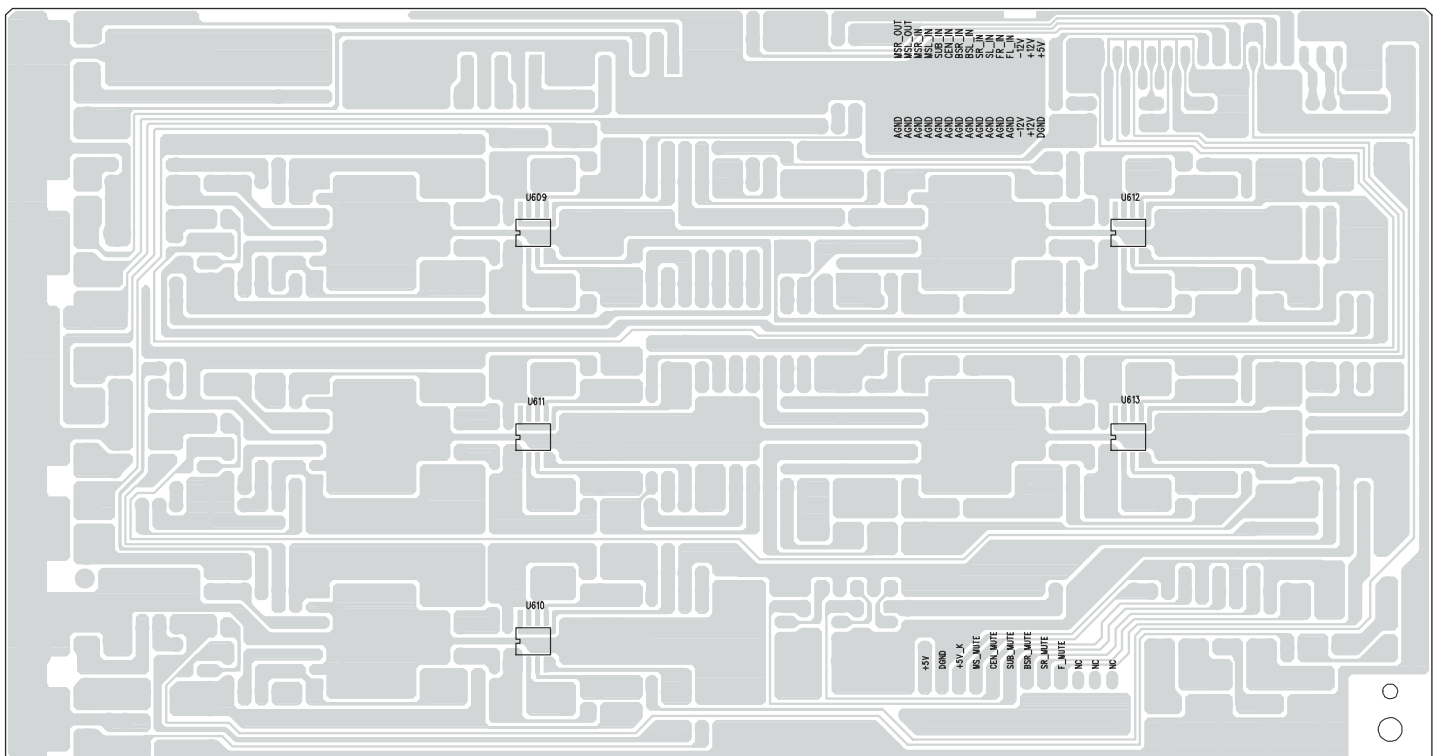
MULTI-CHANNEL BOARD - COPPER SIDE



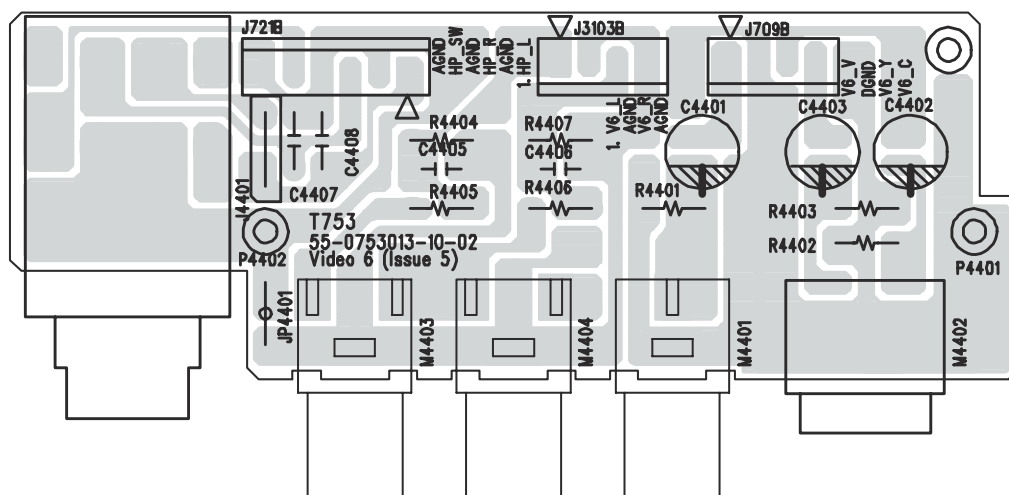
PRE-OUT BOARD - COMPONENT SIDE



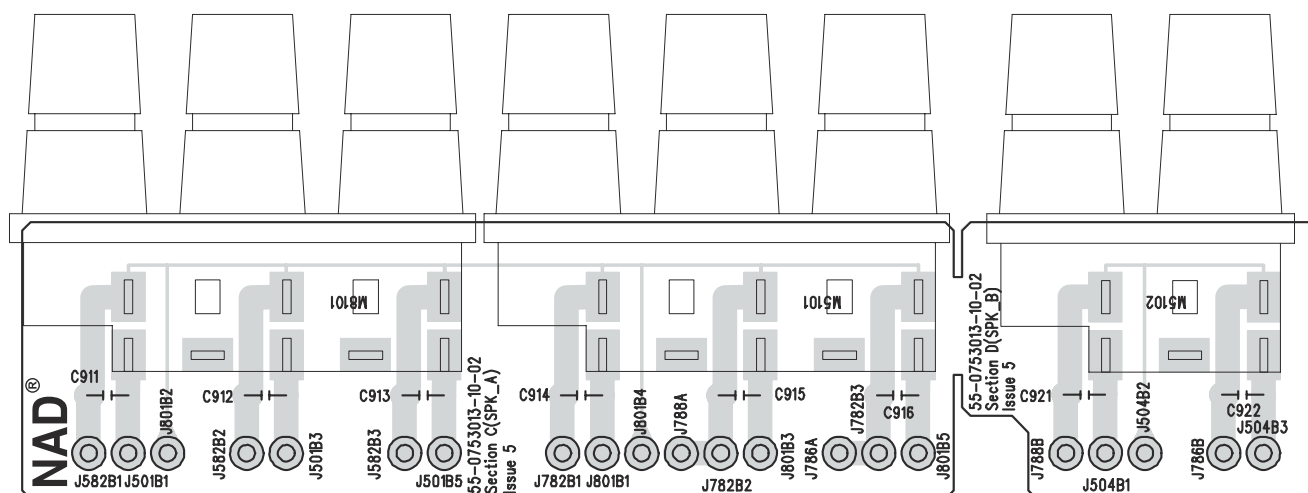
PRE-OUT BOARD - COPPER SIDE



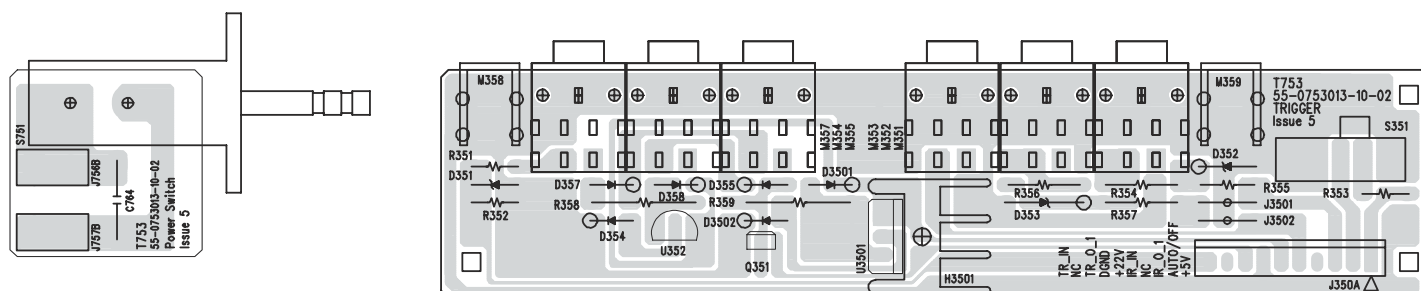
VIDEO 6 BOARD



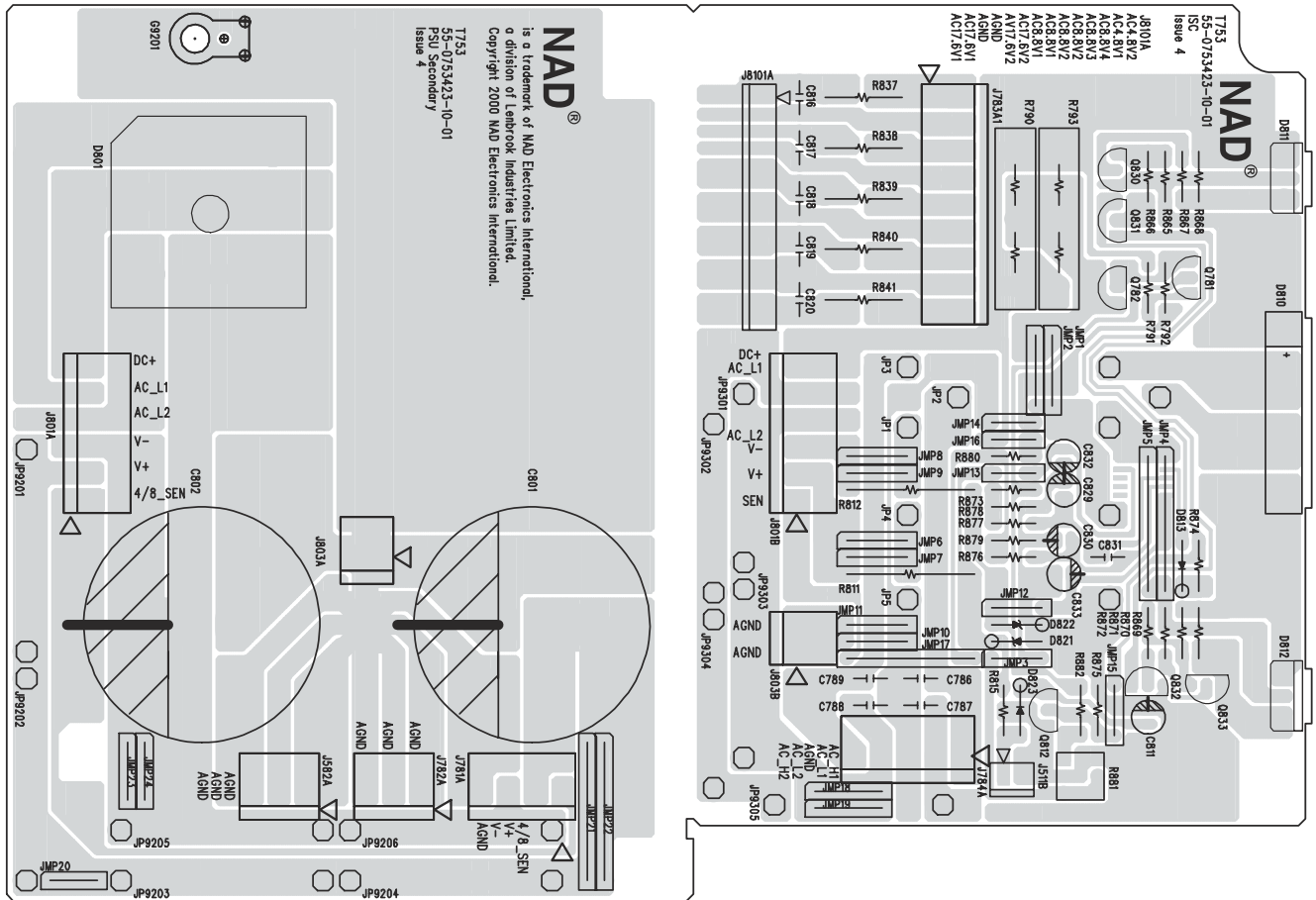
SPEAKER TERMINAL BOARD



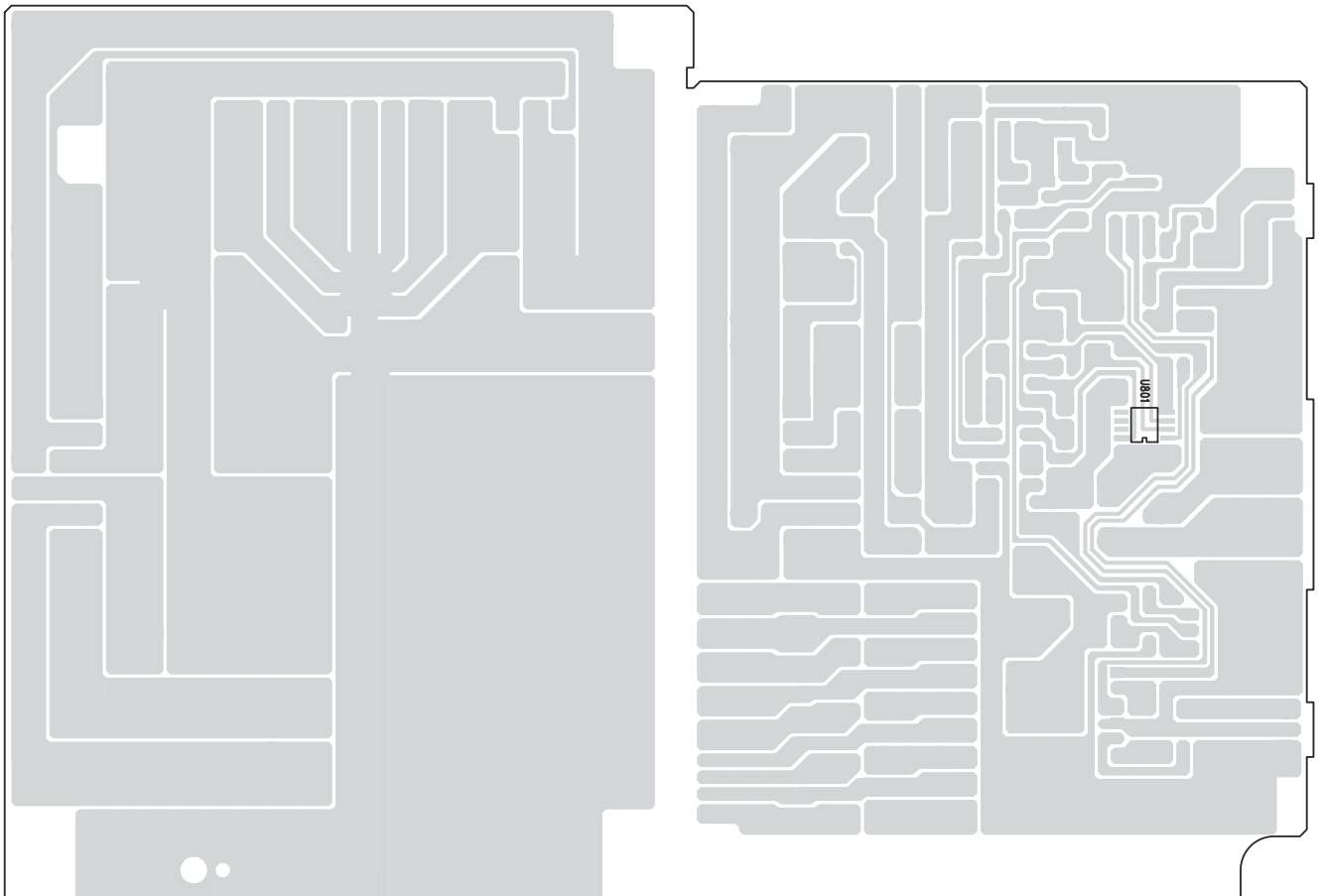
POWER SWITCH / TRIGGER BOARD



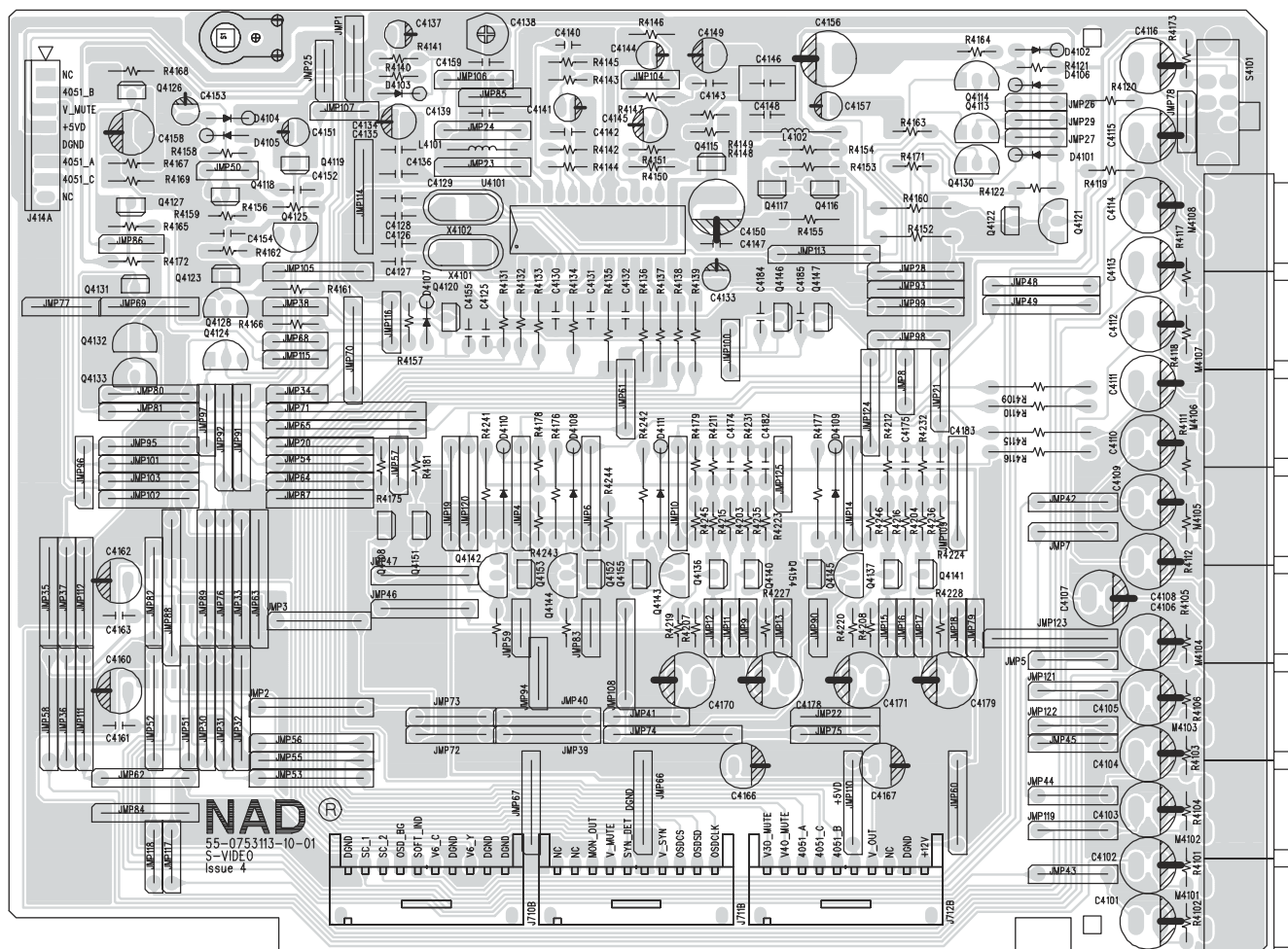
SECONDARY / ISC BOARD - COMPONENT SIDE



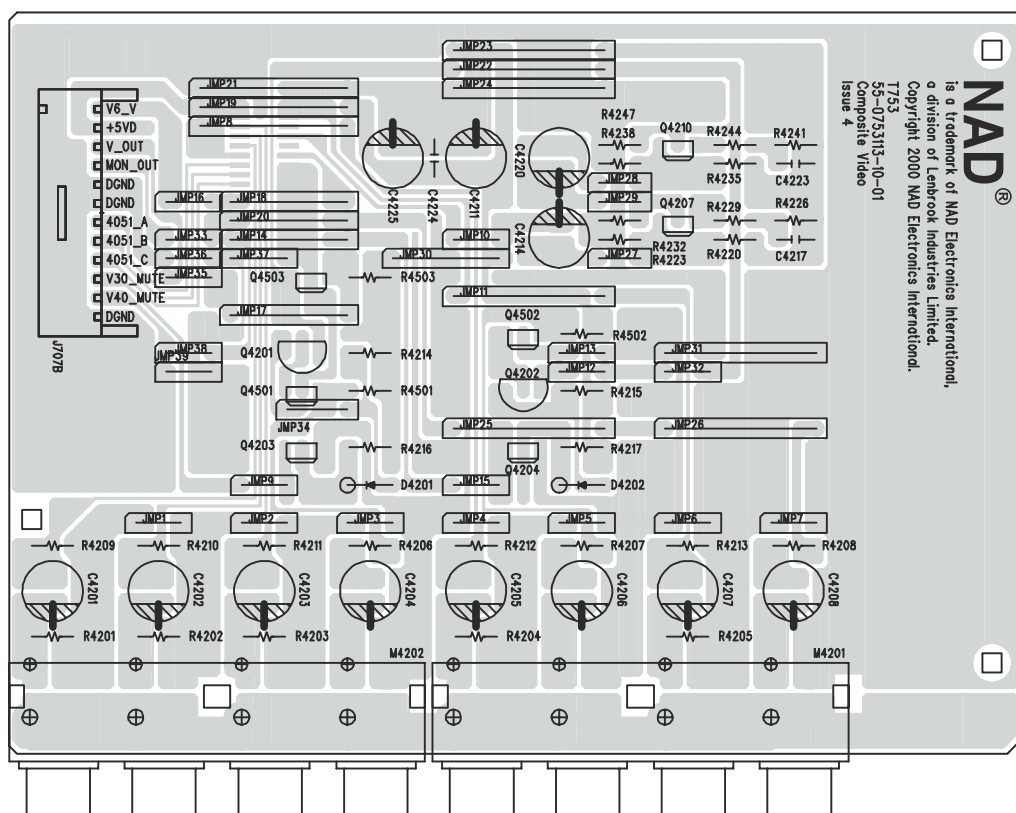
SECONDARY / ISC BOARD - COPPER SIDE



S-VIDEO BOARD

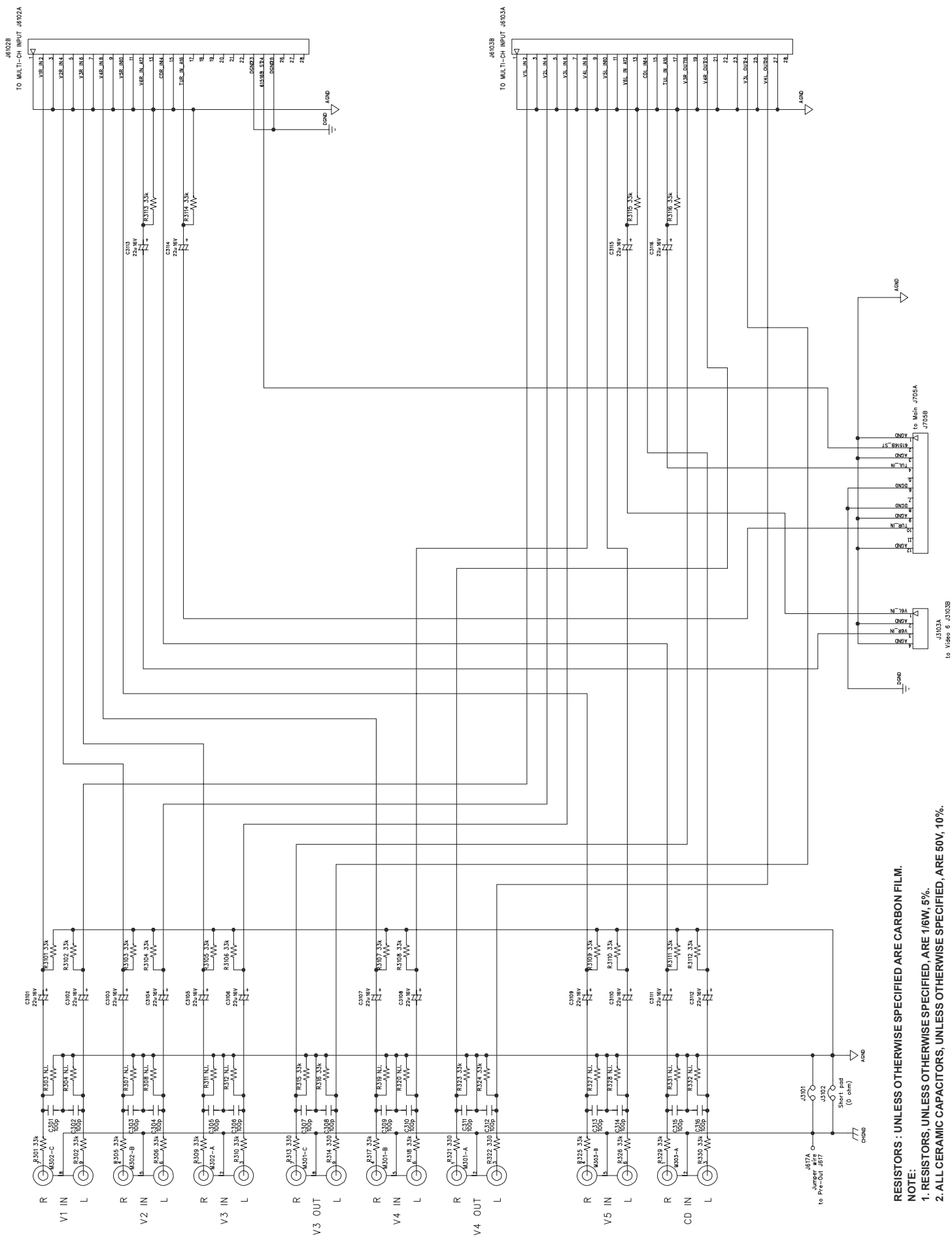


COMPOSITE VIDEO BOARD



SCHEMATIC DIAGRAM

AUDIO SWITCH

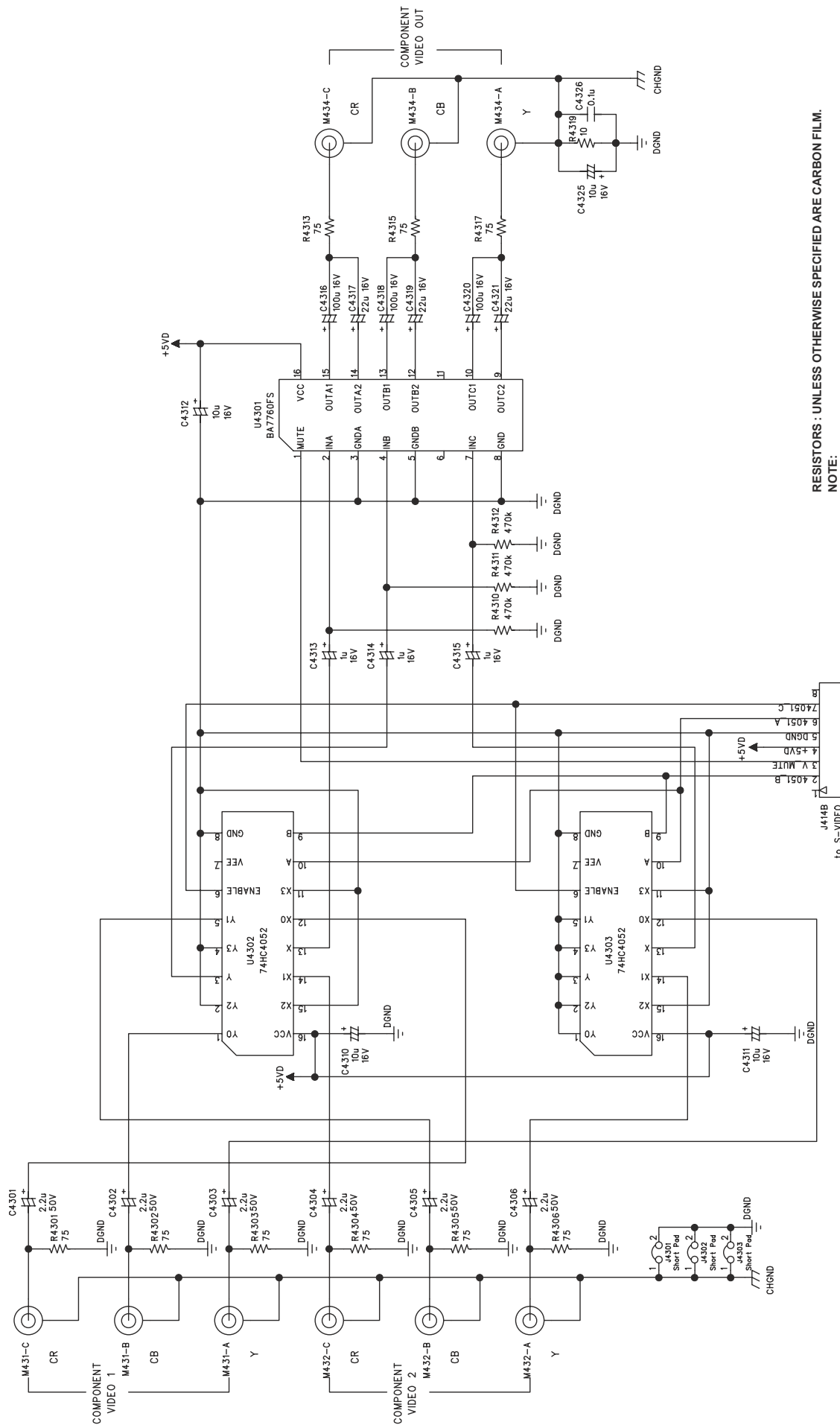


RESISTORS: UNLESS OTHERWISE SPECIFIED ARE CARBON FILM.

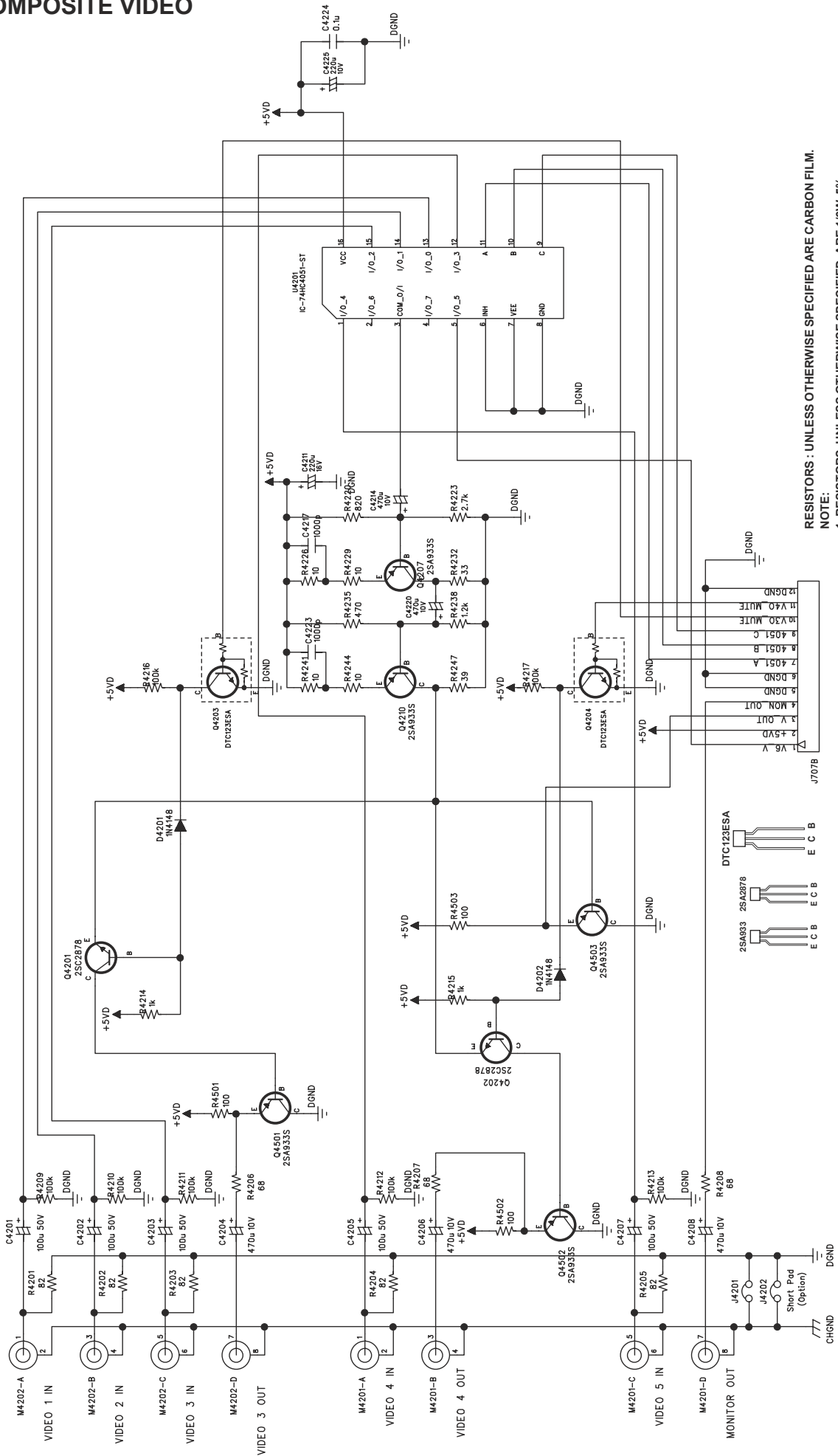
NOTE:

1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.
2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 10%.

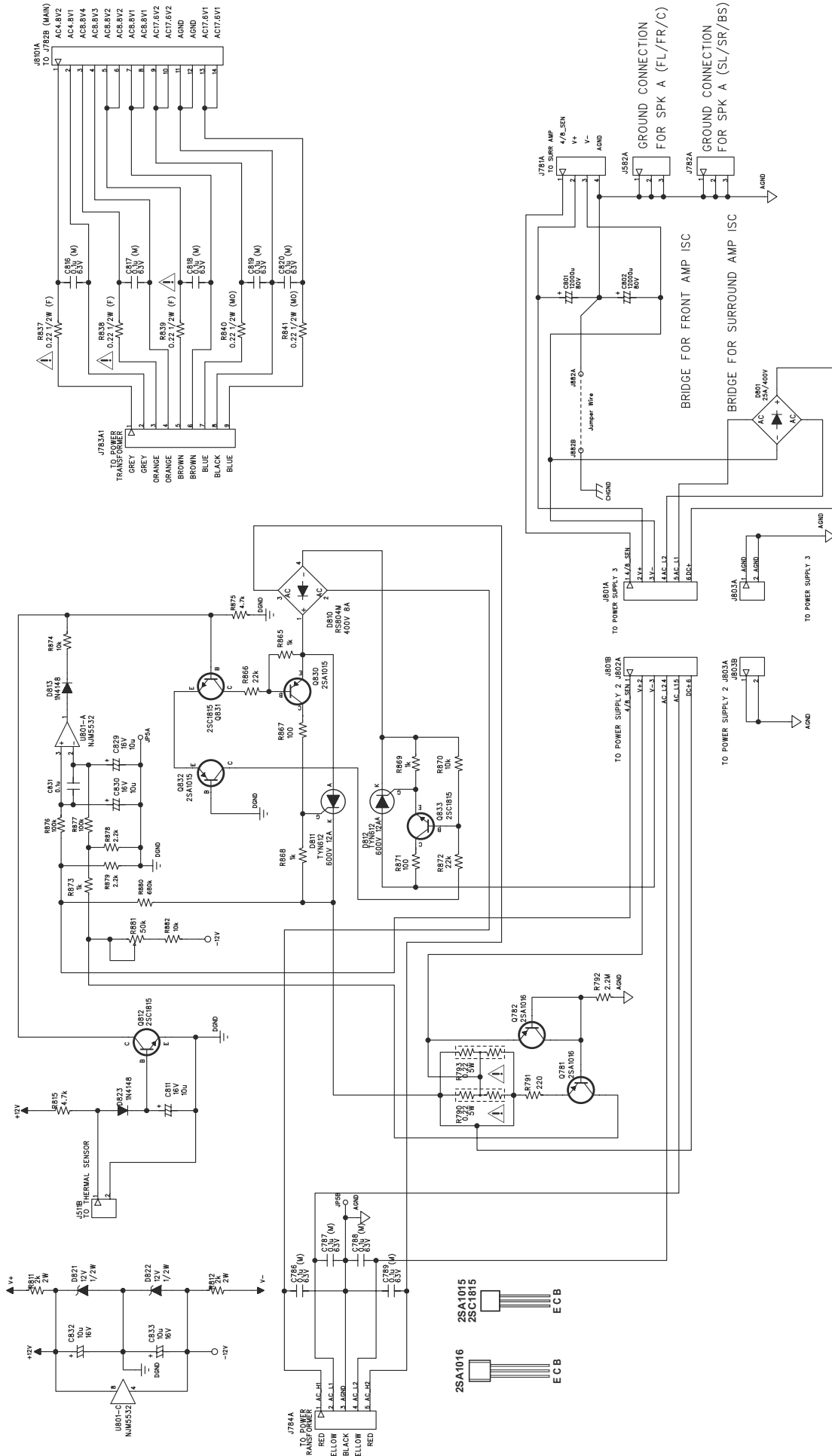
COMPONENT VIDEO



COMPOSITE VIDEO

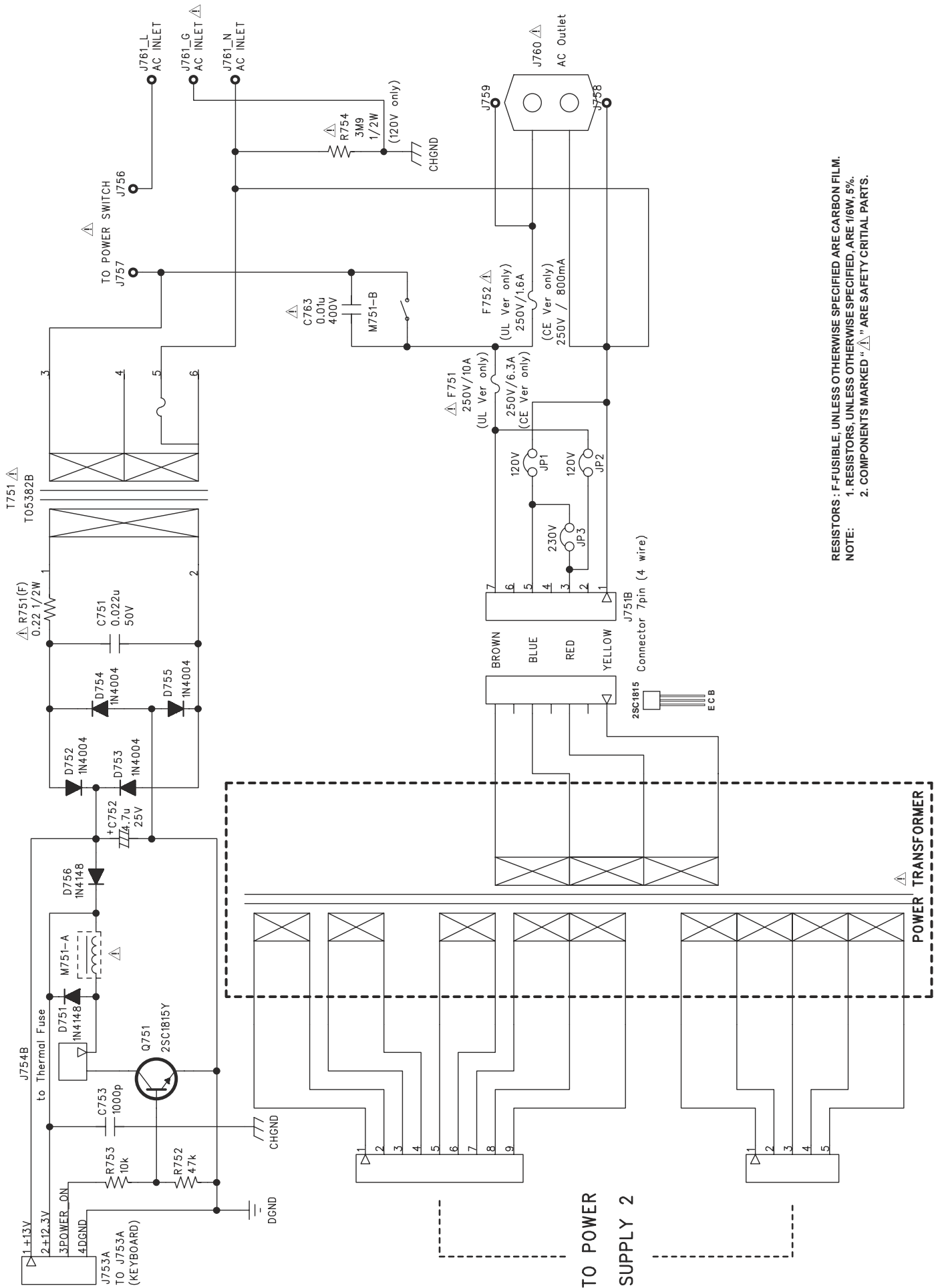


POWER SUPPLY (SECONDARY)

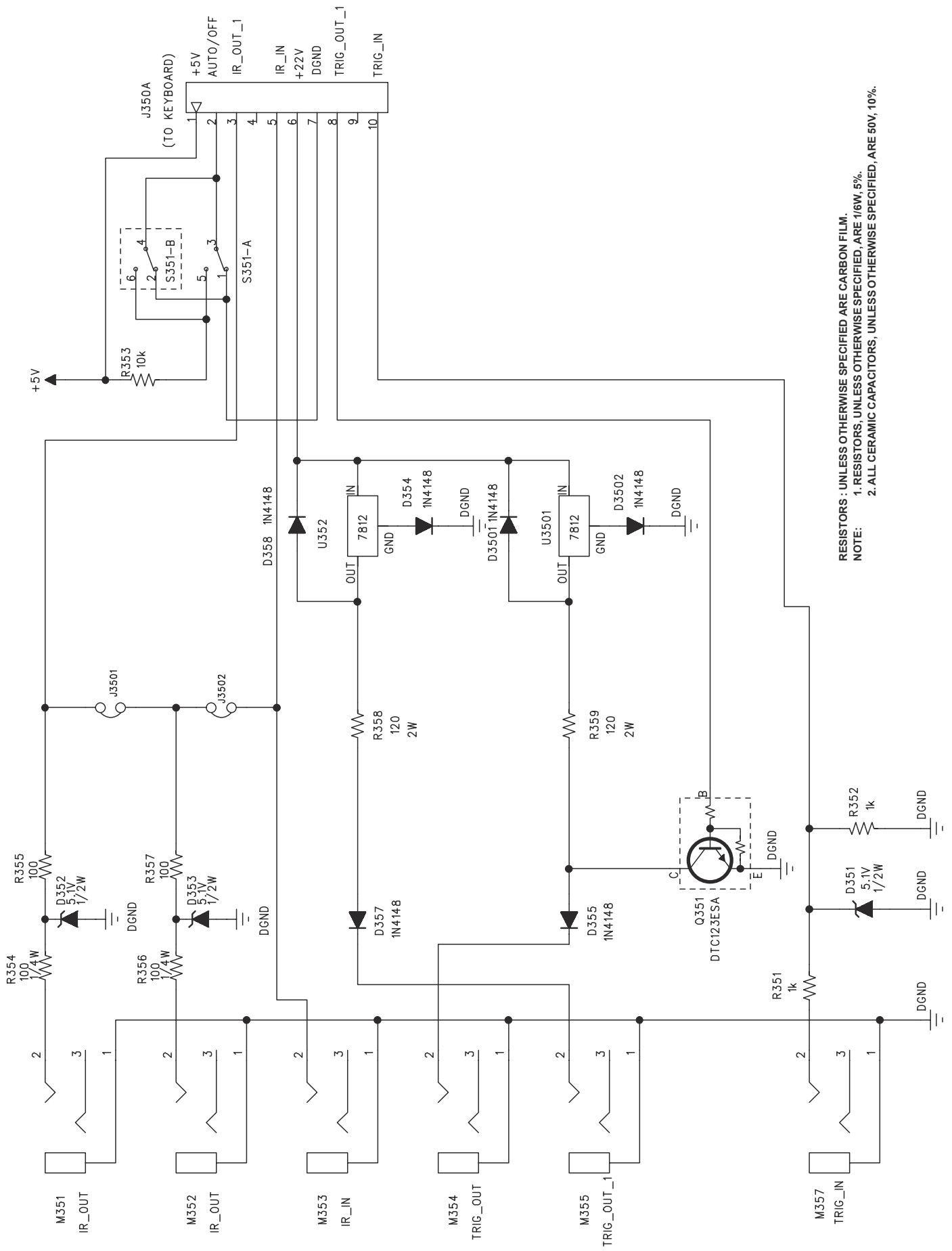


NOTE: 1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.
2. COMPONENTS MARKED "A" ARE SAFETY CRITICAL PARTS.

POWER SUPPLY (STAND BY)

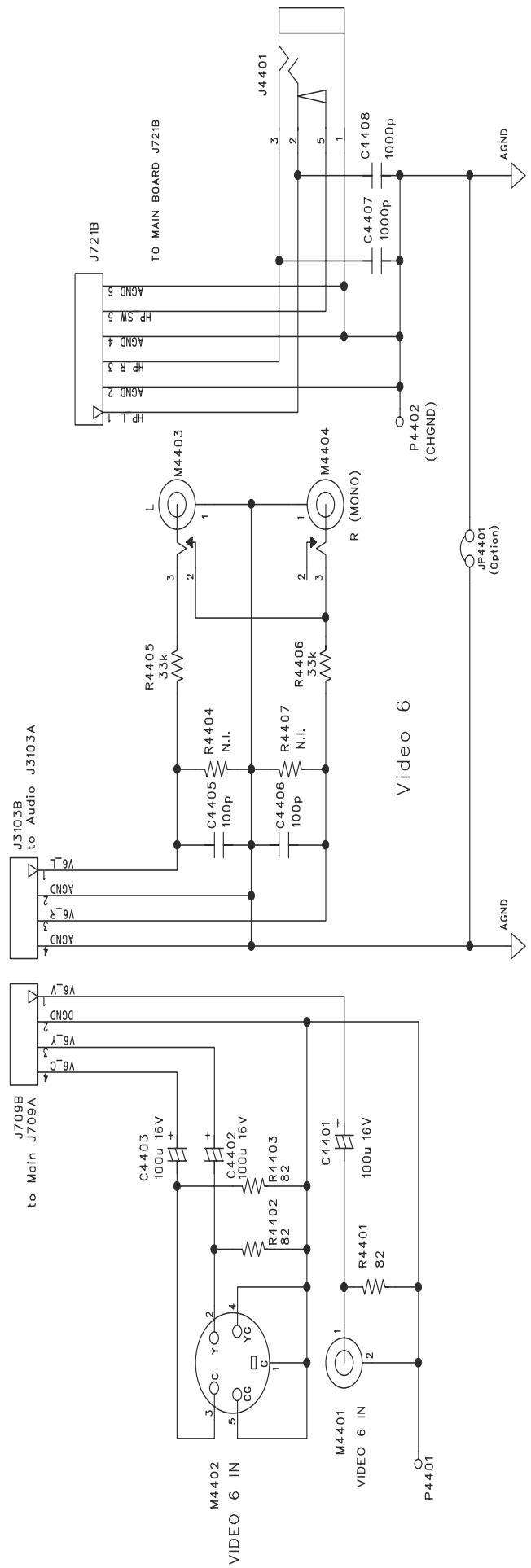


TRIGGER



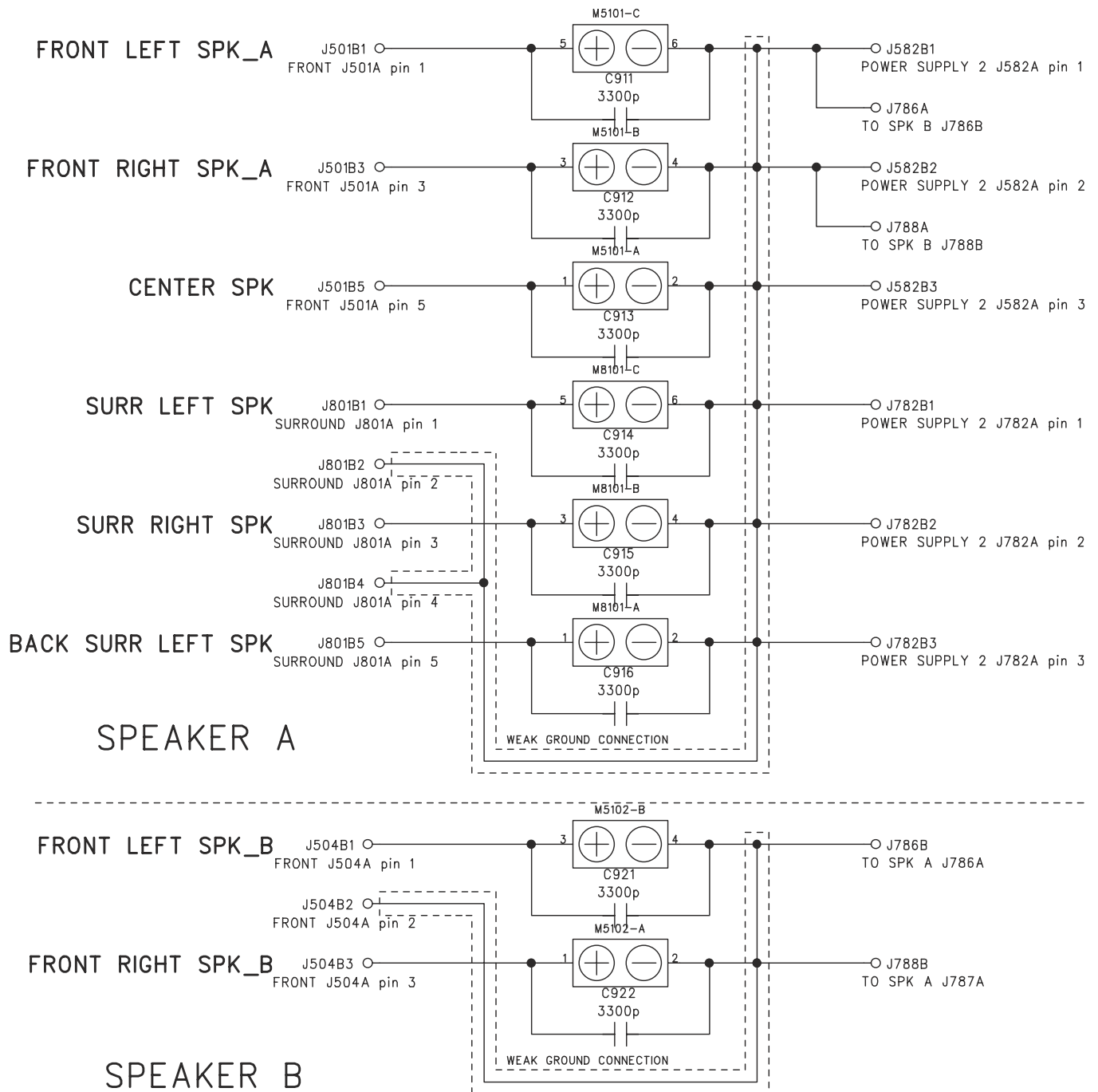
RESISTORS : UNLESS OTHERWISE SPECIFIED ARE CARBON FILM.
 NOTE: 1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.
 2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 10%.

VIDEO 6

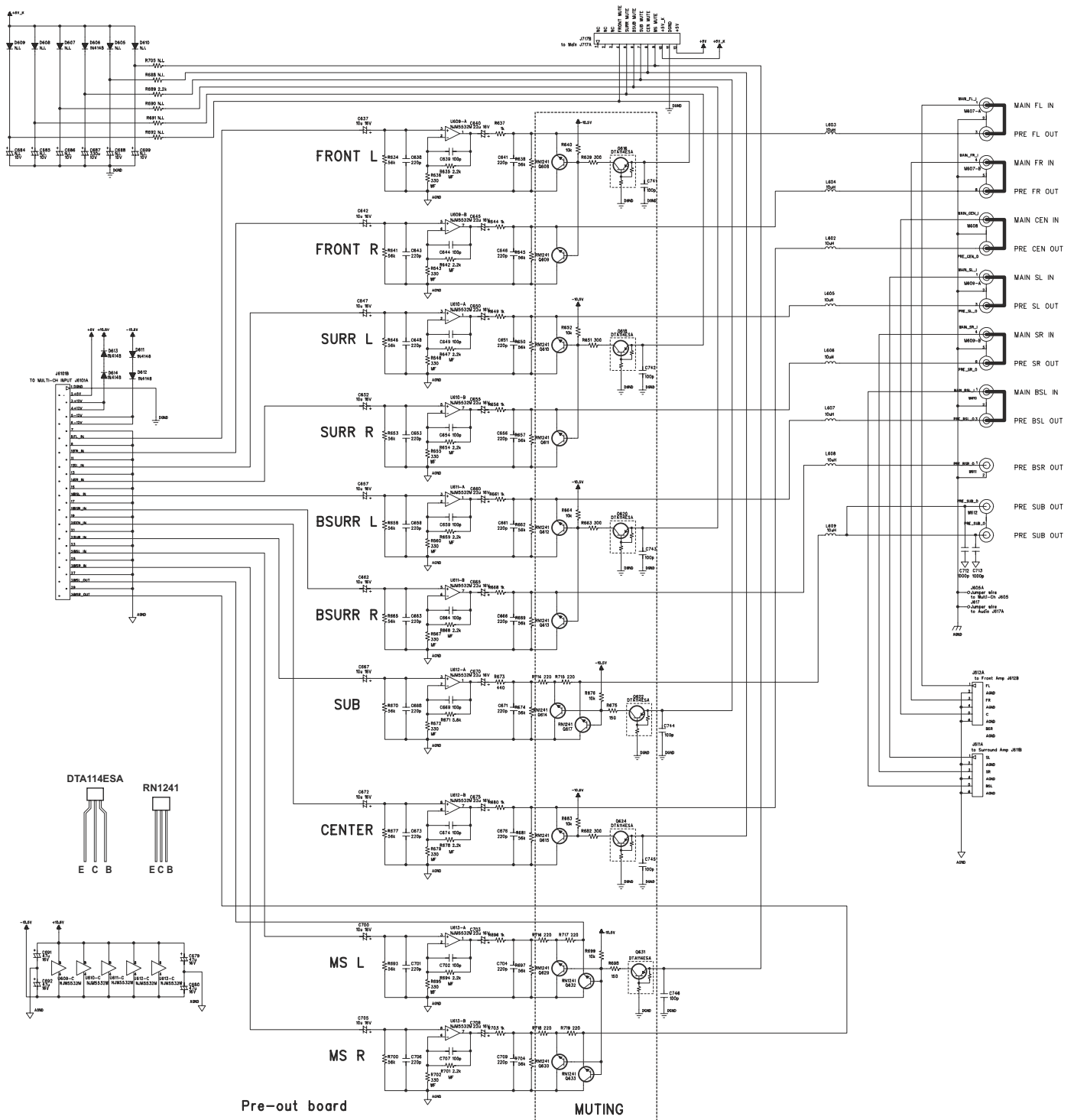


RESISTORS : UNLESS OTHERWISE SPECIFIED ARE CARBON FILM.
NOTE:
1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.
2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 10%.

SPEAKER A & B



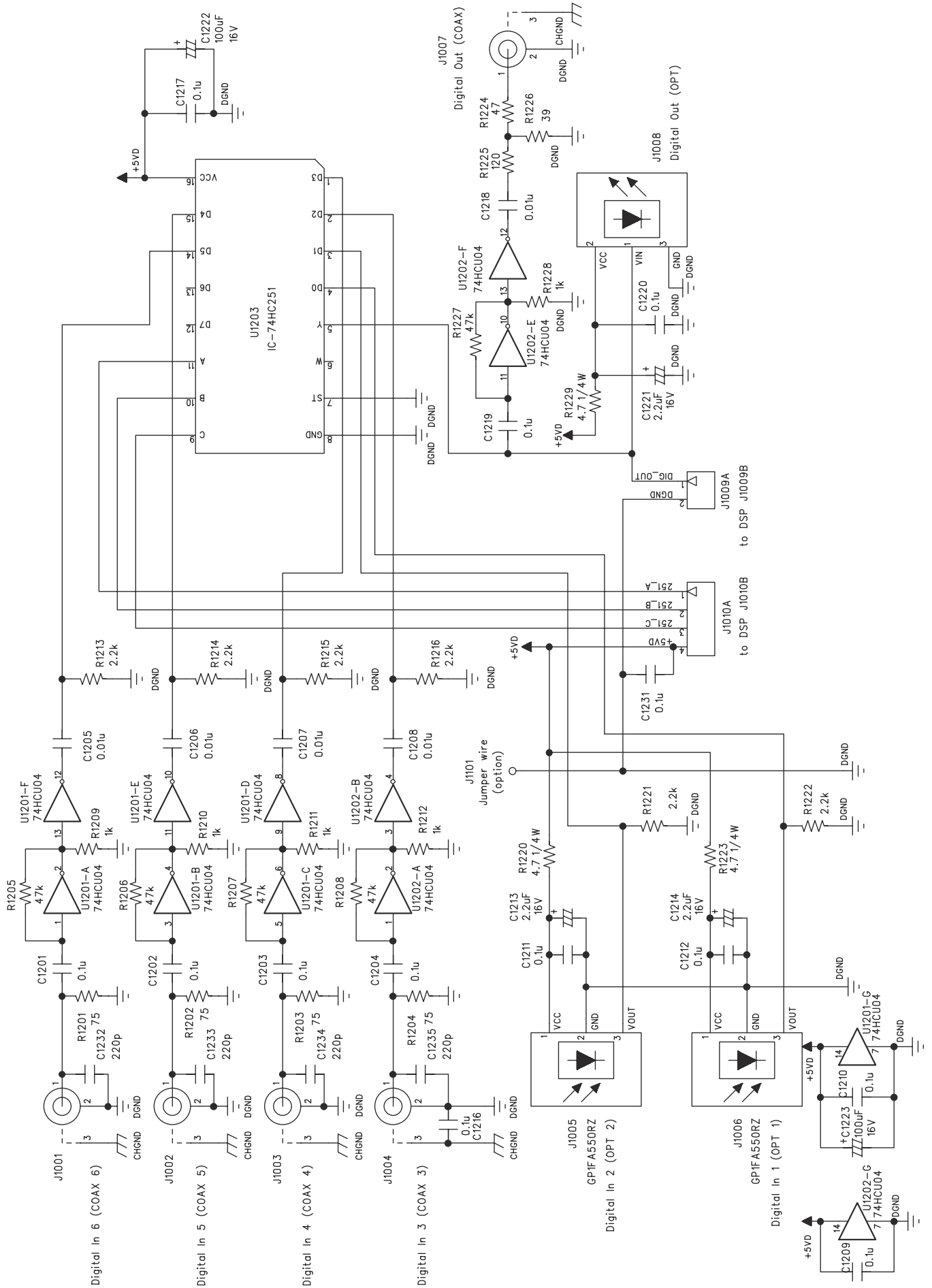
PREOUT



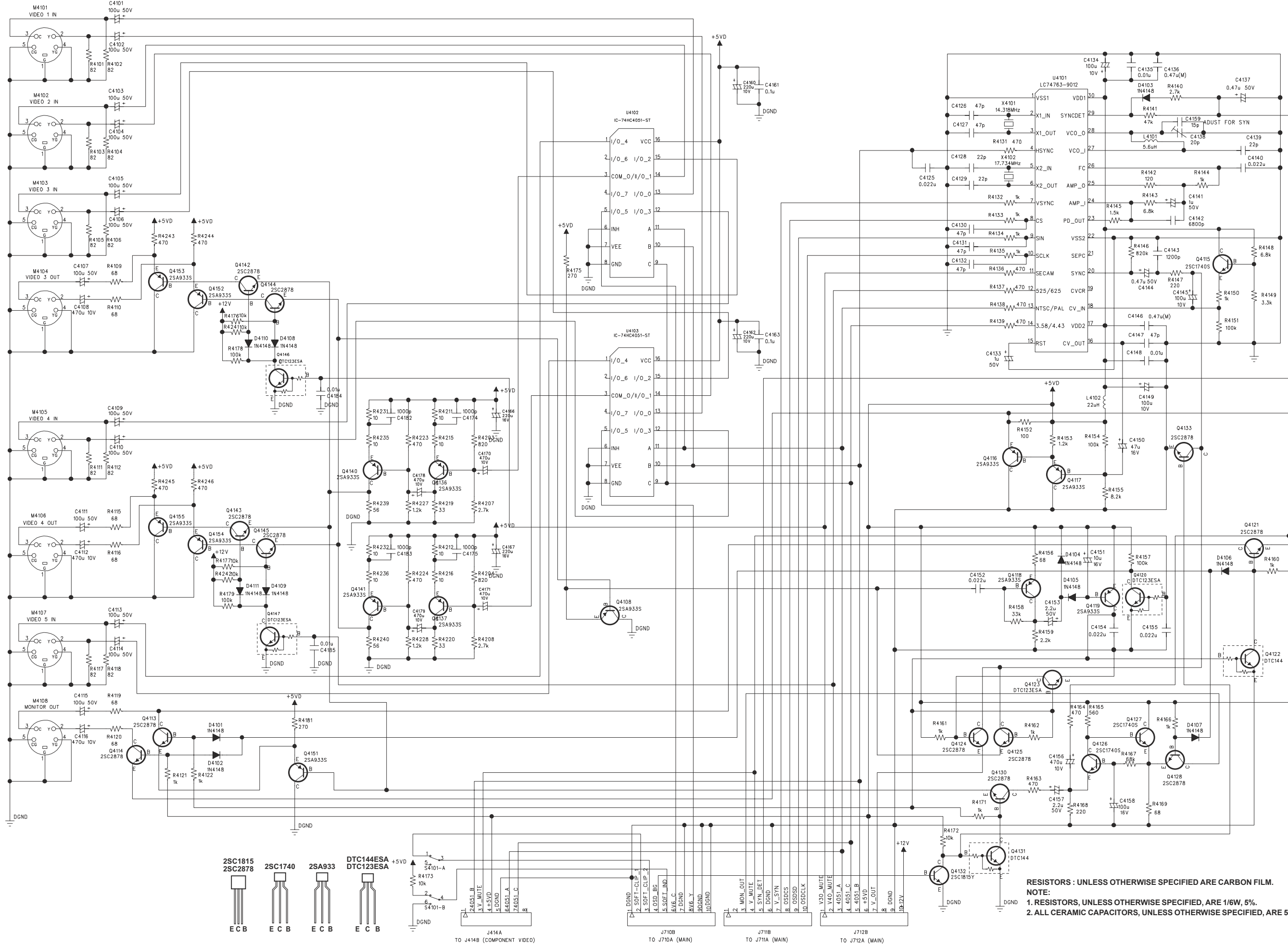
NOTE:

1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.
2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 10%.

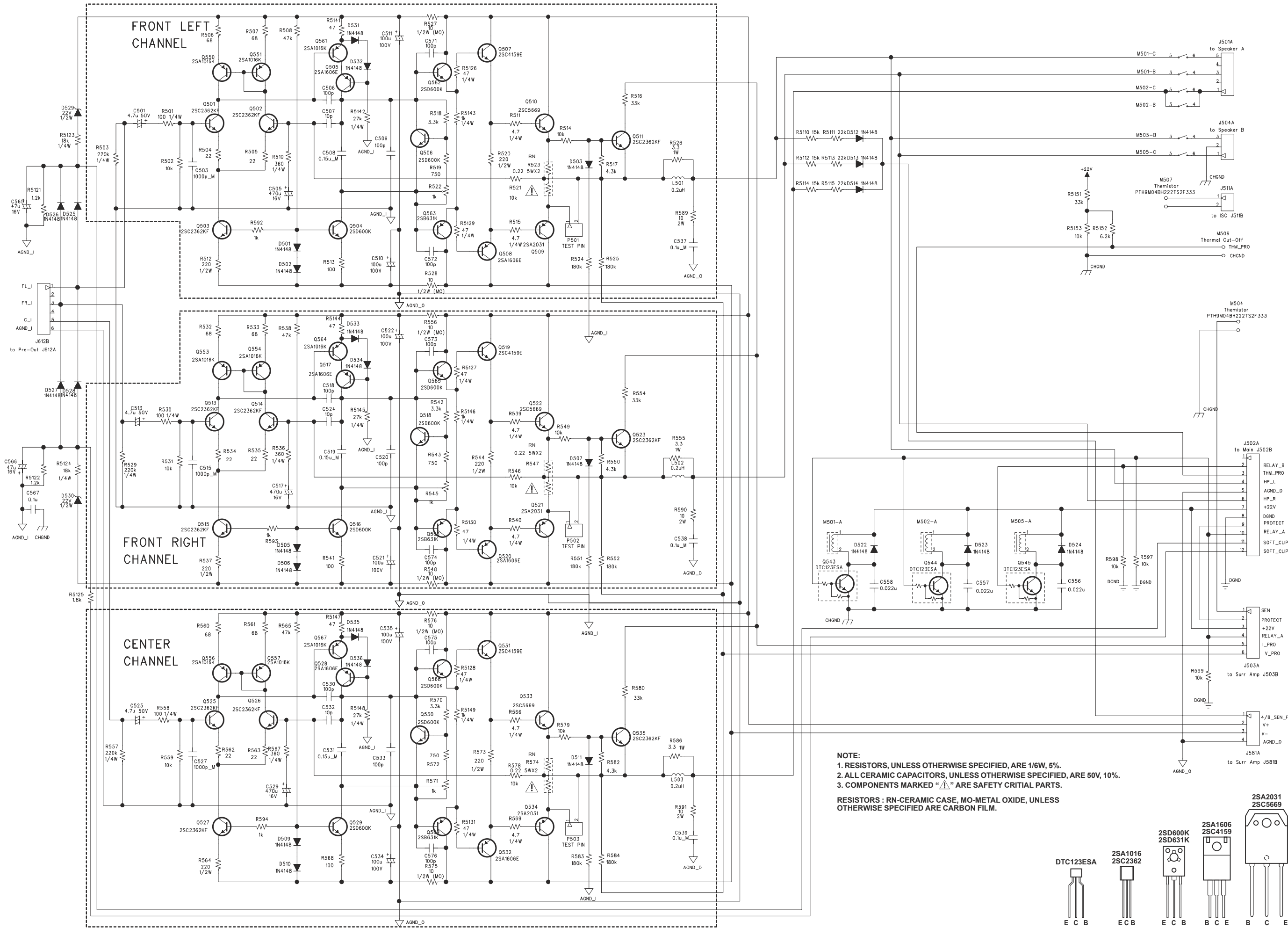
DIGITAL INPUT / OUTPUT



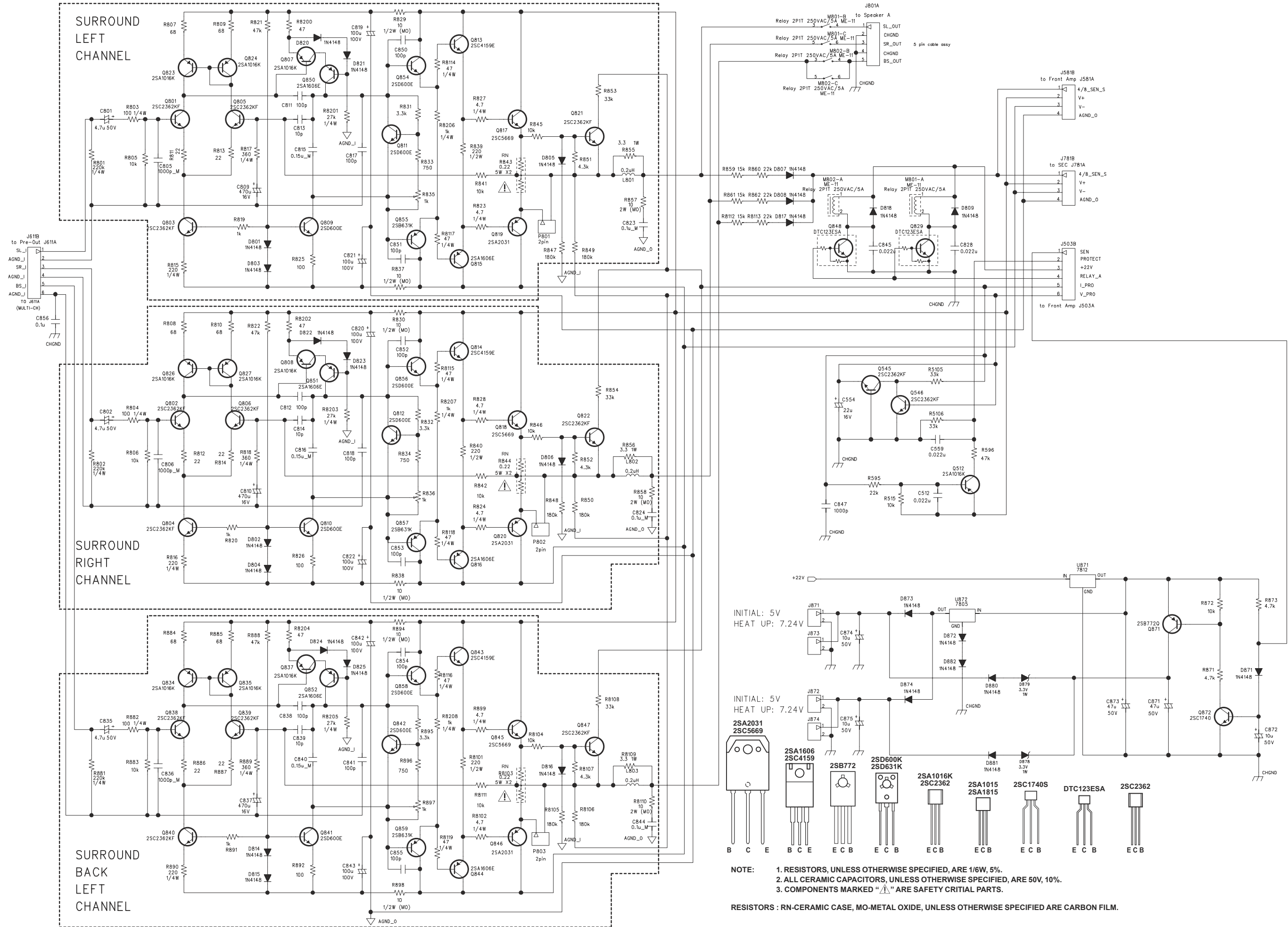
S-VIDEO



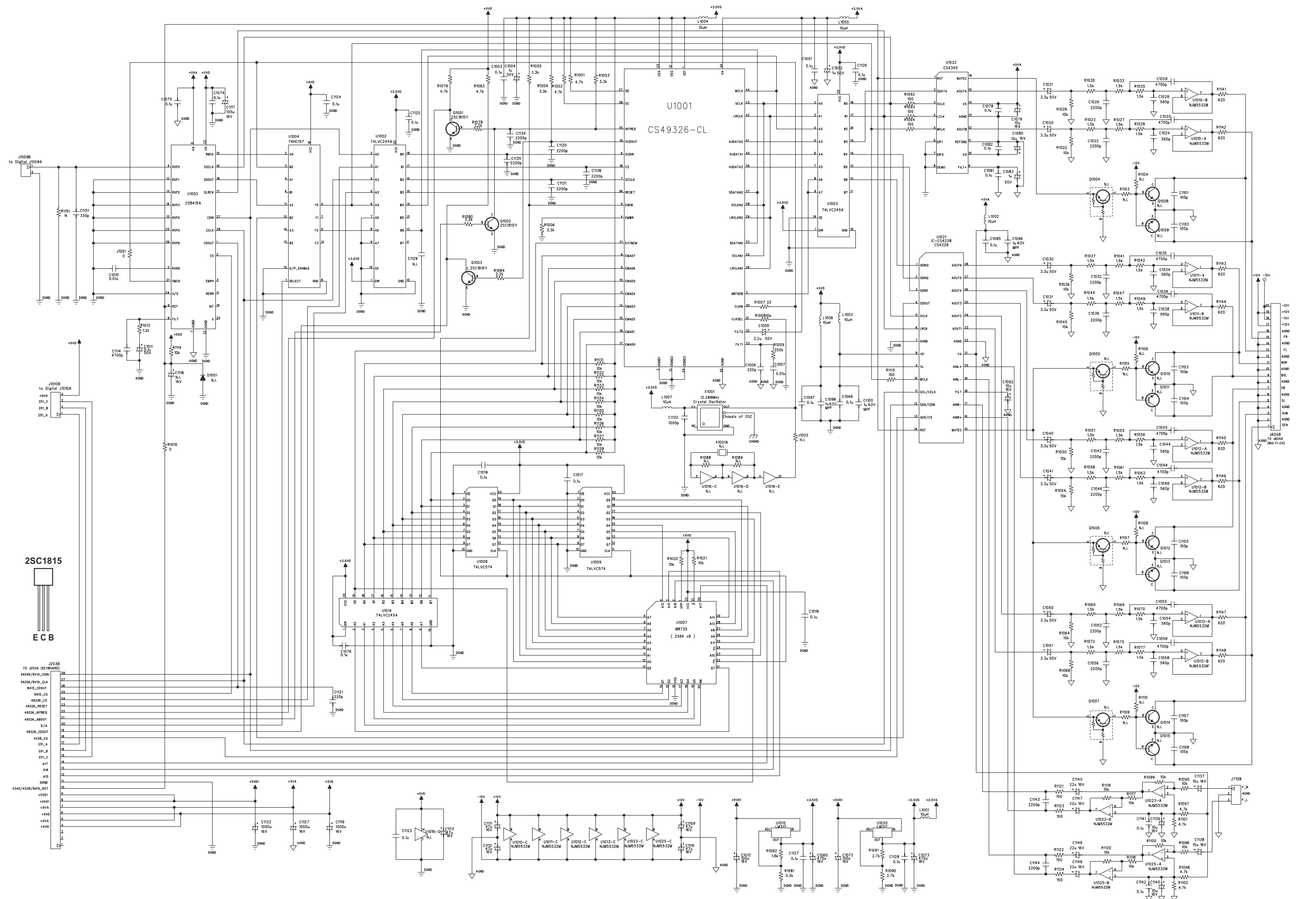
FRONT / CENTER CHANNEL POWER AMPLIFIER



SURROUND CHANNEL POWER AMPLIFIER



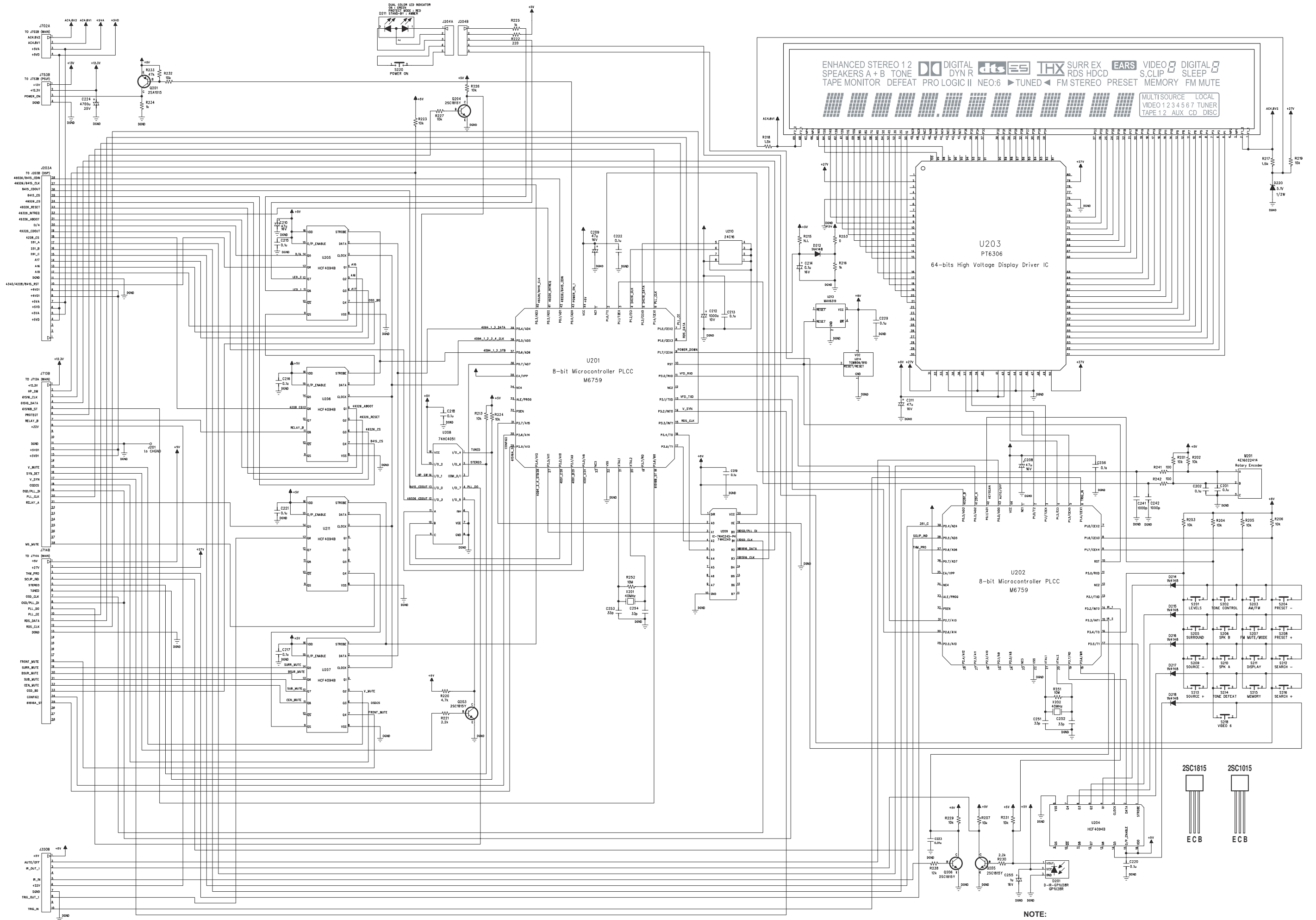
DSP



NOTE:

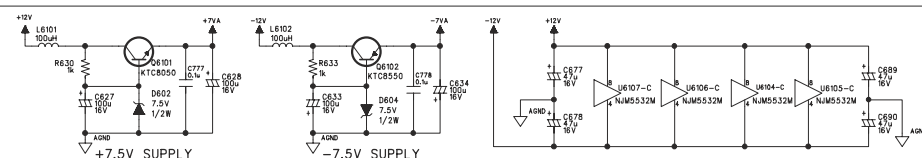
1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.
2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 10%.

KEYBOARD

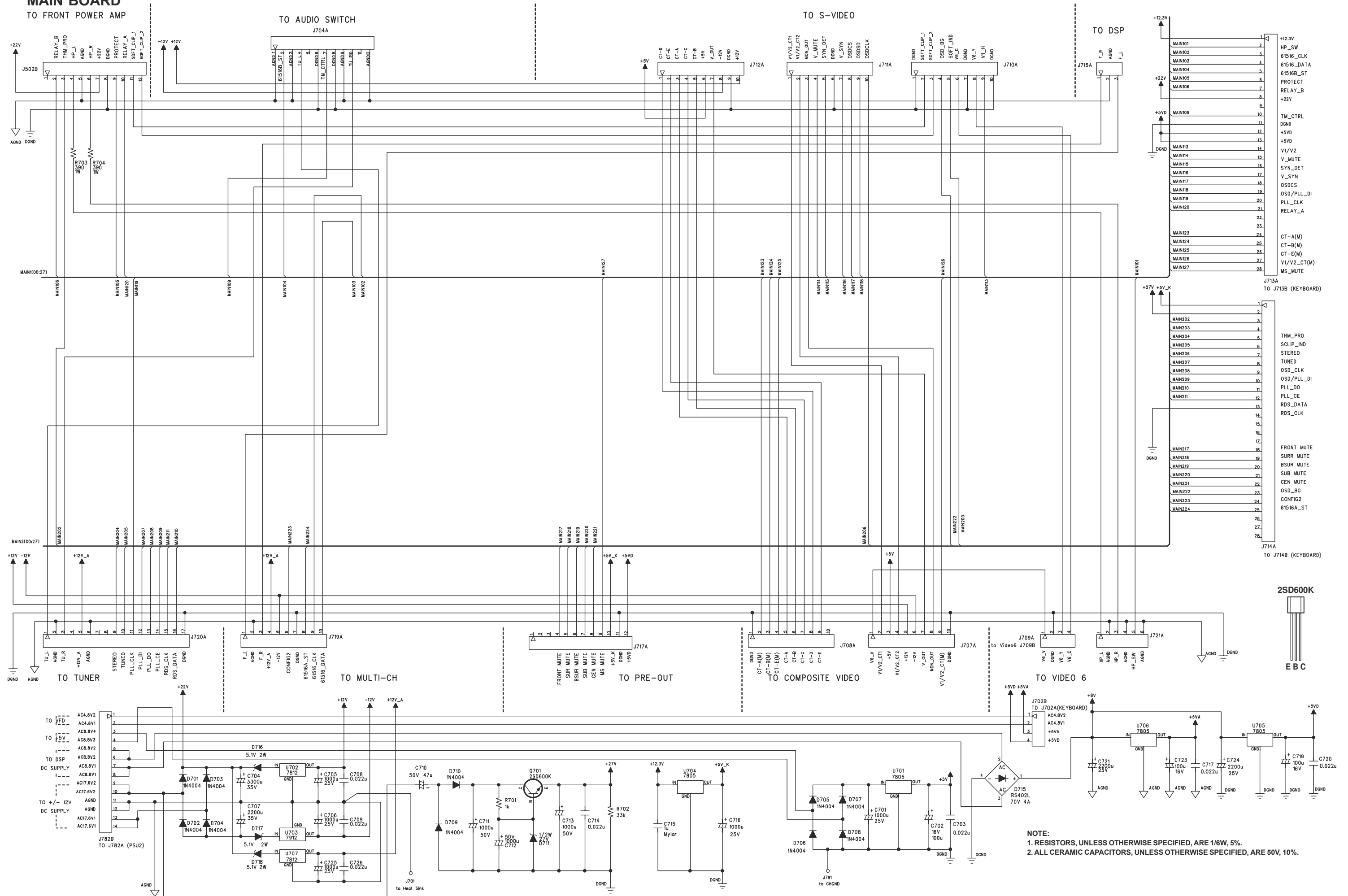


NOTE:
1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.
2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 5%.

42



MAIN BOARD TO FRONT POWER AMP



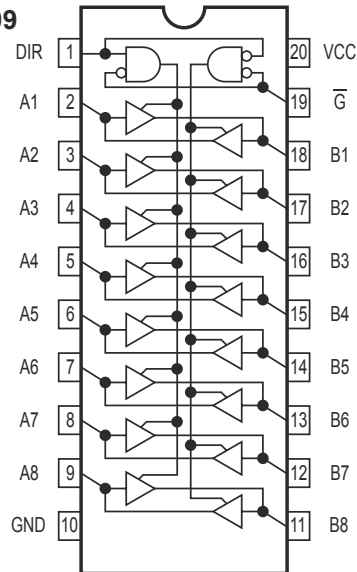
IC BLOCK DIAGRAM

74LVC245

DSP BOARD: U1002, U1003, U1014

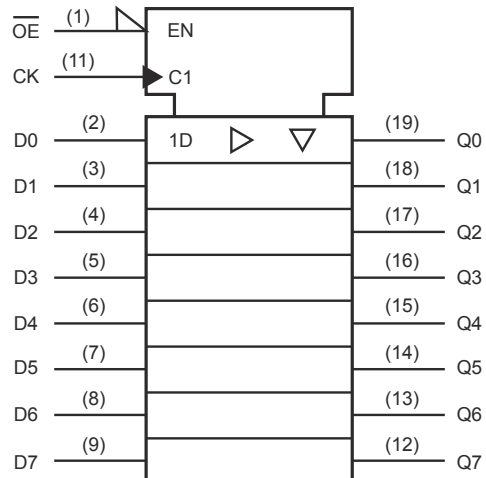
74VHC245

KEYBOARD: U209



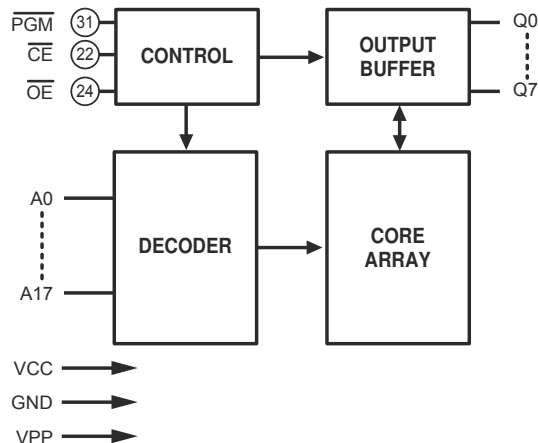
74LVQ574

DSP BOARD: U1008, U1009



W27C020

DSP BOARD: U1007



NJM5532

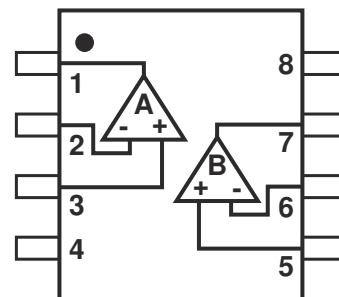
DSP BOARD: U1010~U1013, U1023 & U1025

MULTI-CHANNEL: U6104~U607

PRE-OUT BOARD: U609~U613

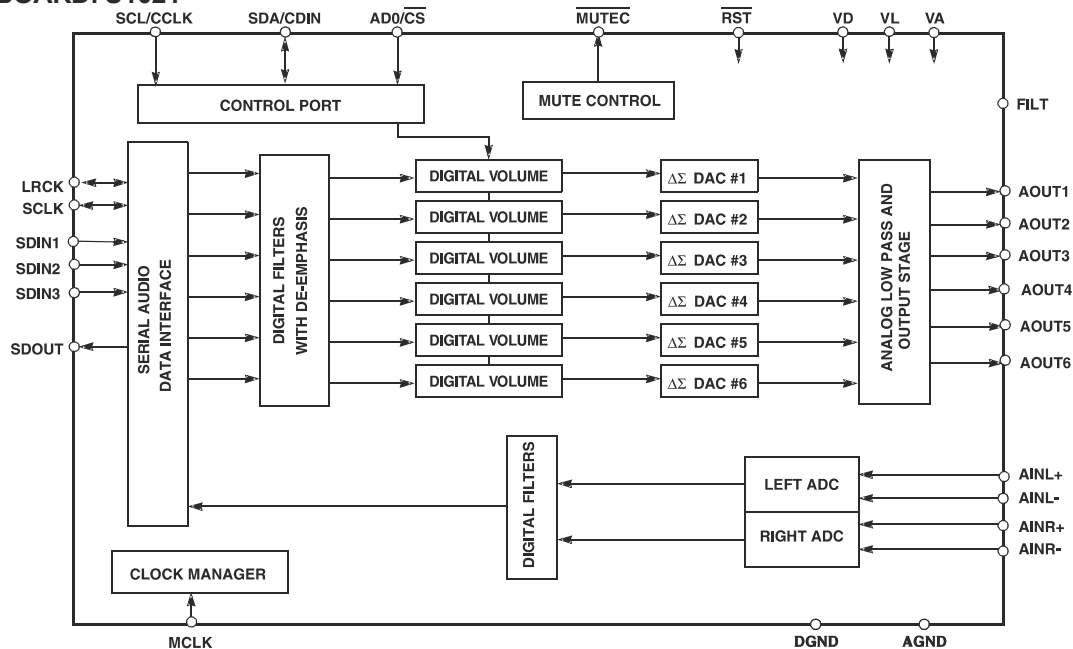
AUDIO BOARD: U305

ISC BOARD: U801

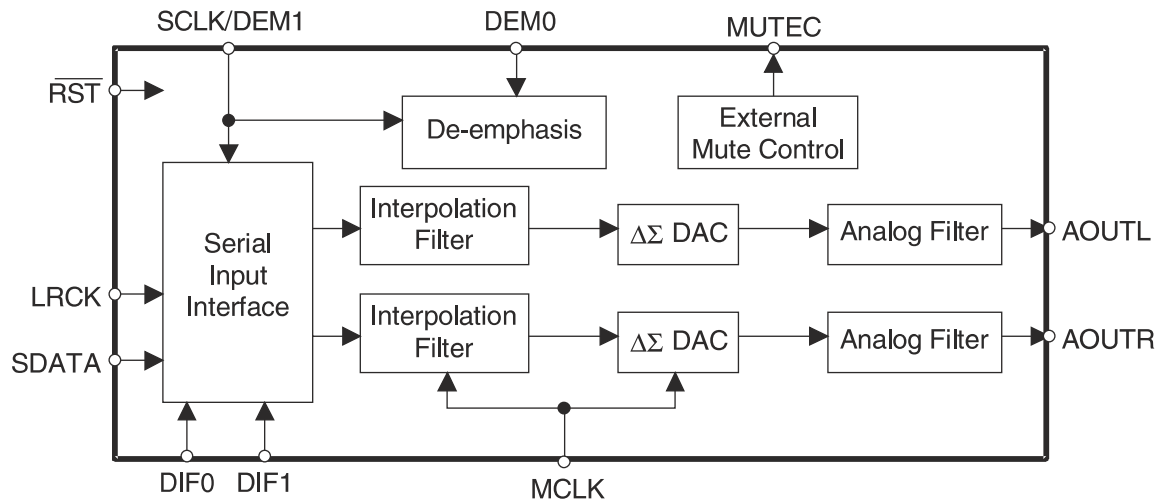


CS4228AKS

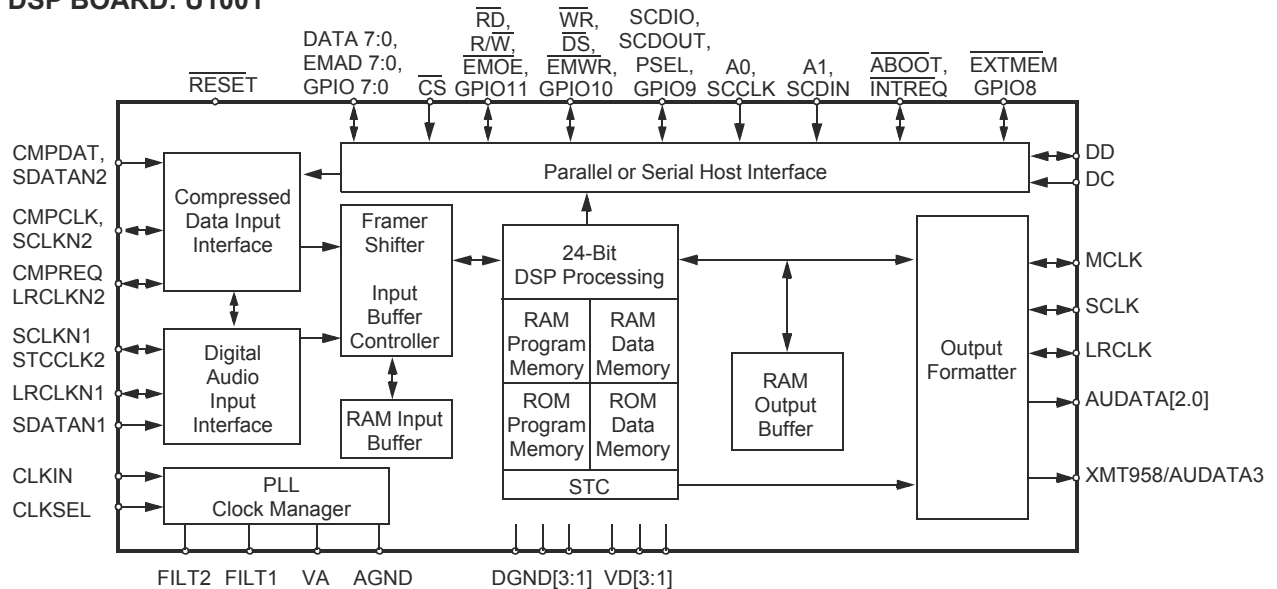
DSP BOARD: U1021



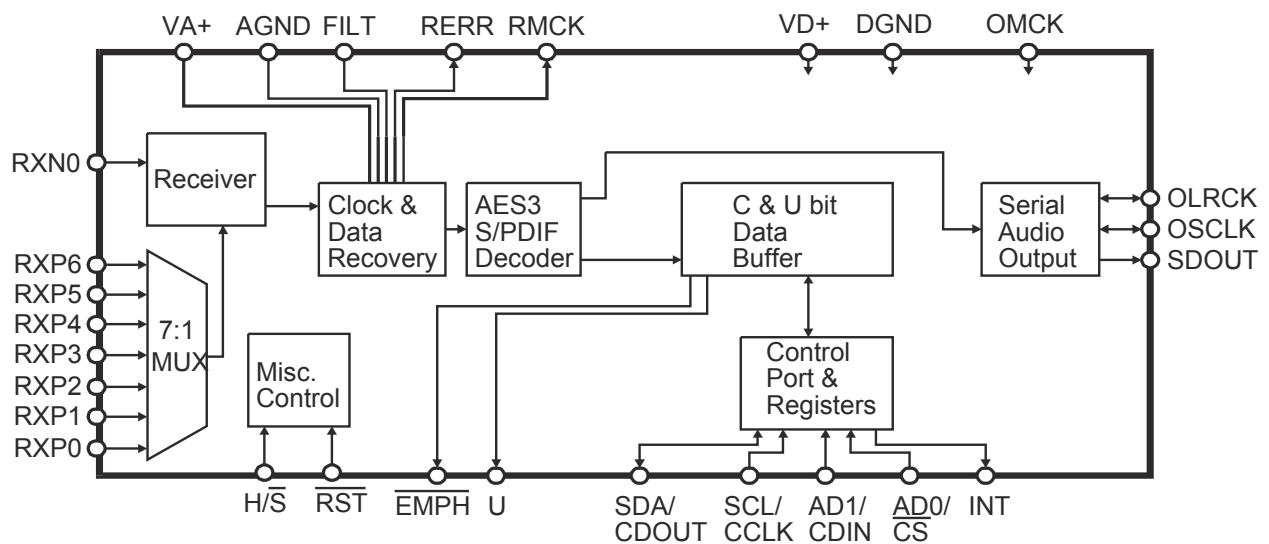
CS4340
DSP BOARD: U1022



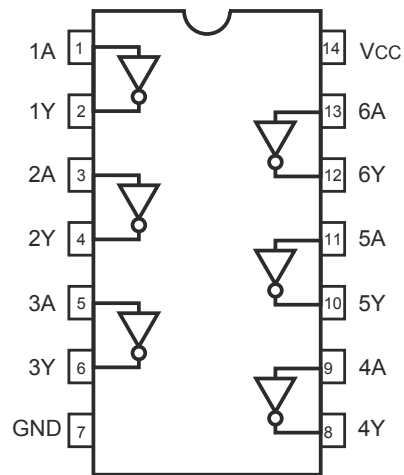
CS49326
DSP BOARD: U1001



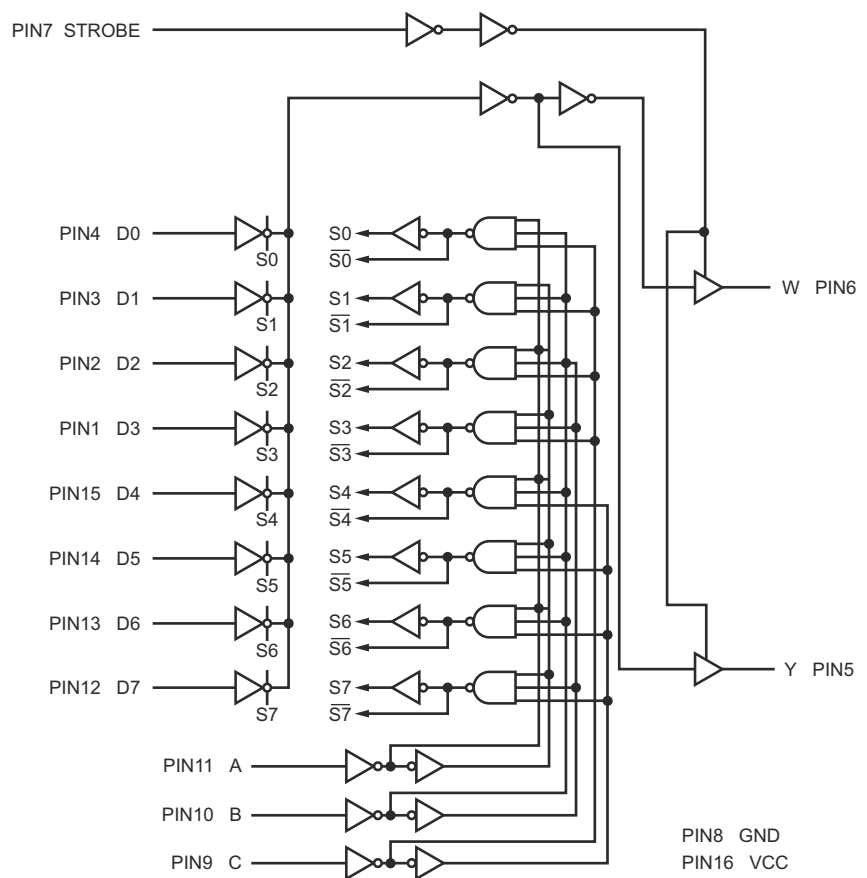
CS8415A
DSP BOARD: U1005



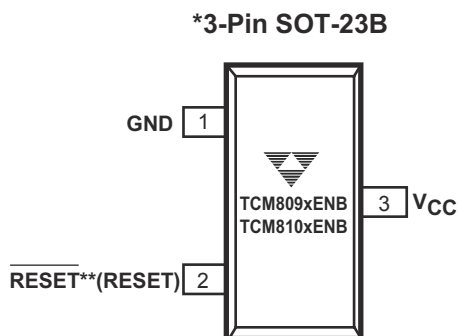
74HCU04
DIGITAL BOARD: U1201 & U1202



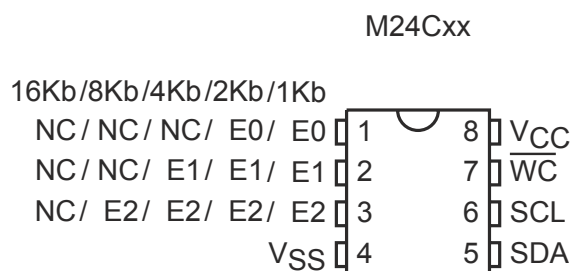
74HC251
DIGITAL BOARD: U1203



TCM810
KEYBOARD: U214



AT24C16
KEYBOARD: U210



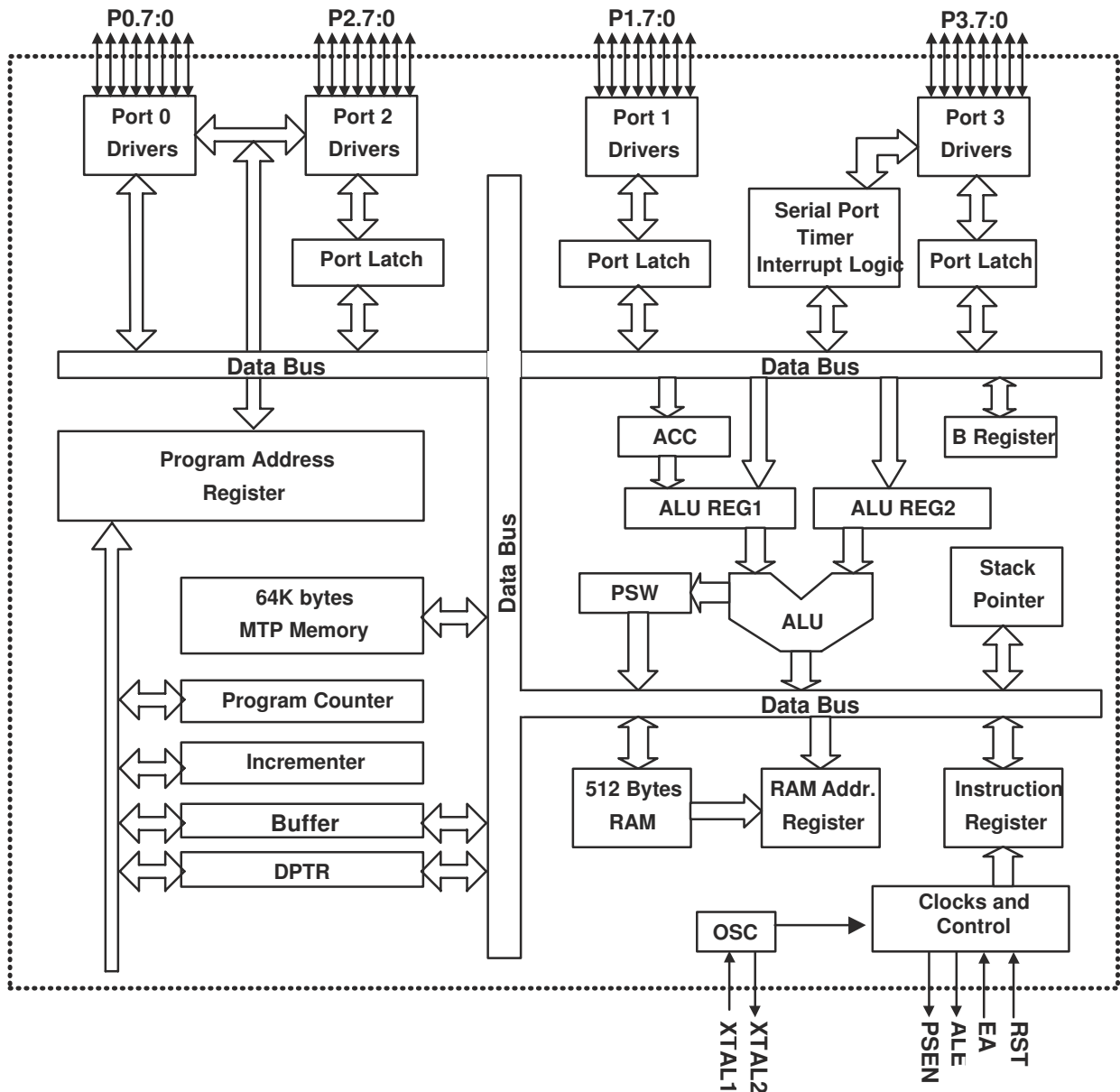
NOTE: *3-Pin SOT-23B is equivalent to JEDEC TO-236
** () is for TCM810

KEYBOARD: U204~U207 & U211



M6759

KEYBOARD: U201 & U202

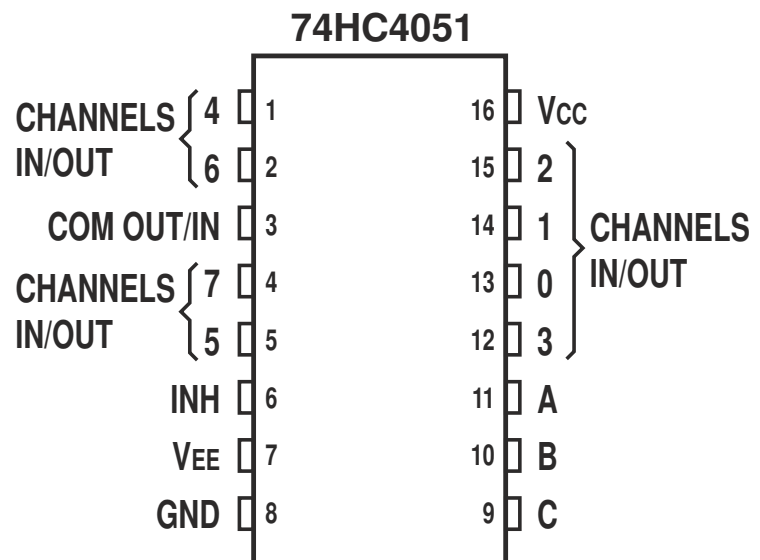


74HC4051

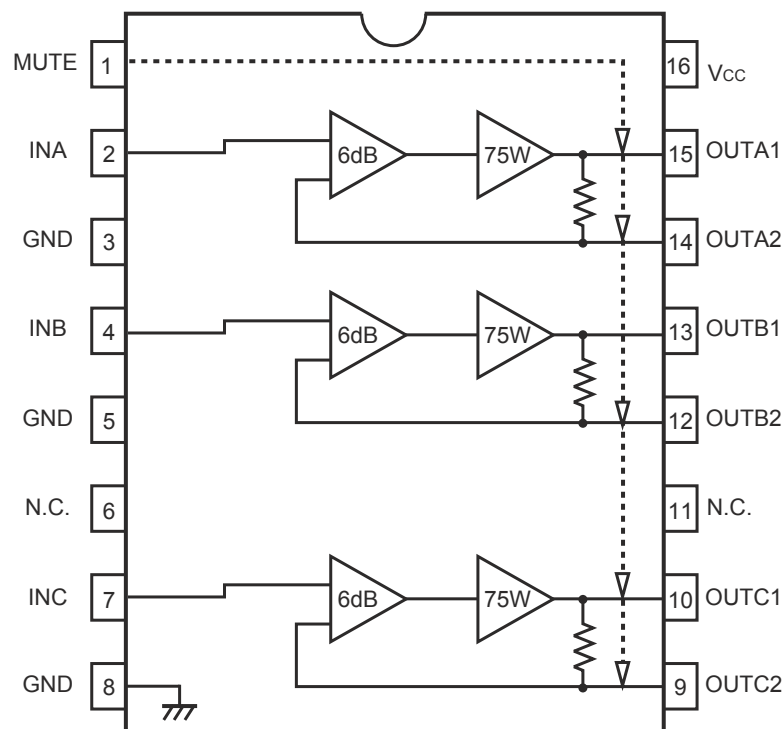
KEYBOARD: U208

S-VIDEO BOARD: U4102 & U4103

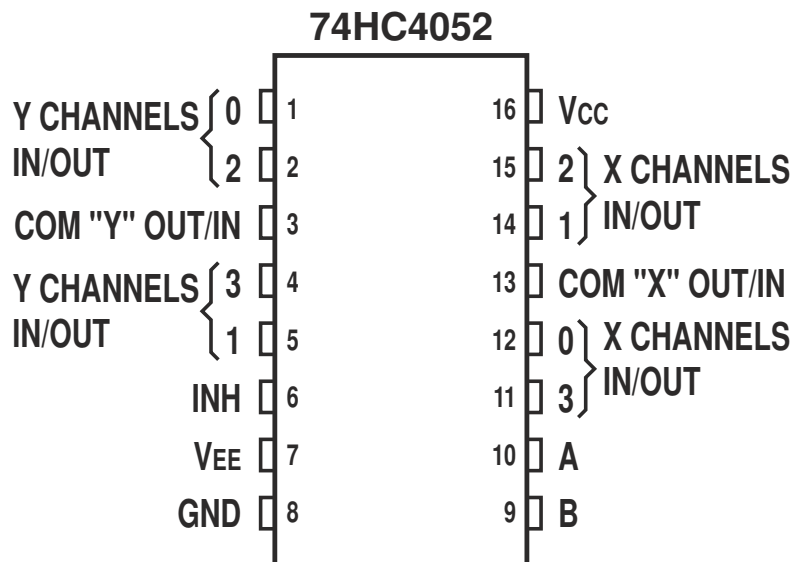
COMPOSITE VIDEO BOARD: U4201



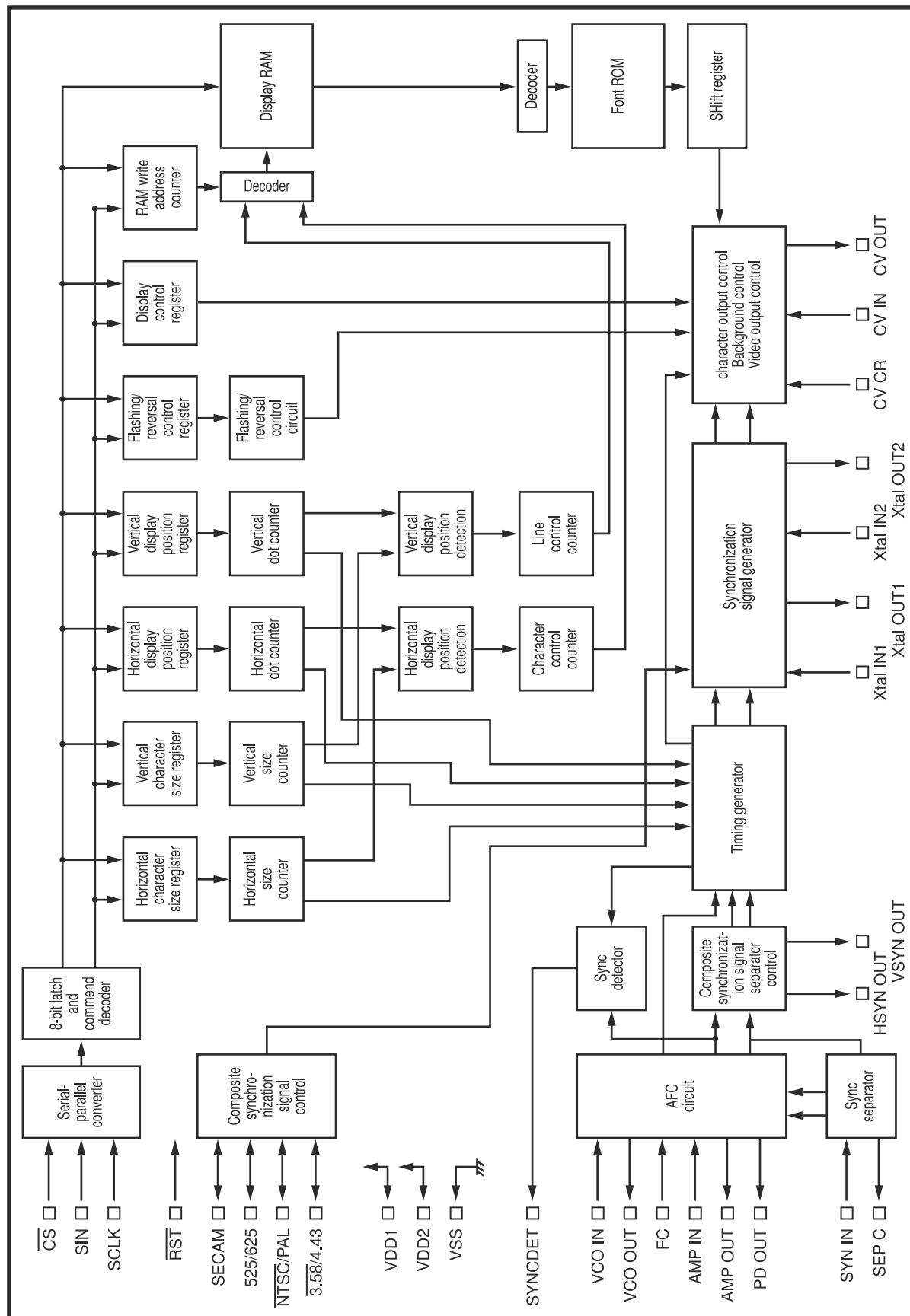
BA7660FS
COMPONENT VIDEO BOARD: U4301



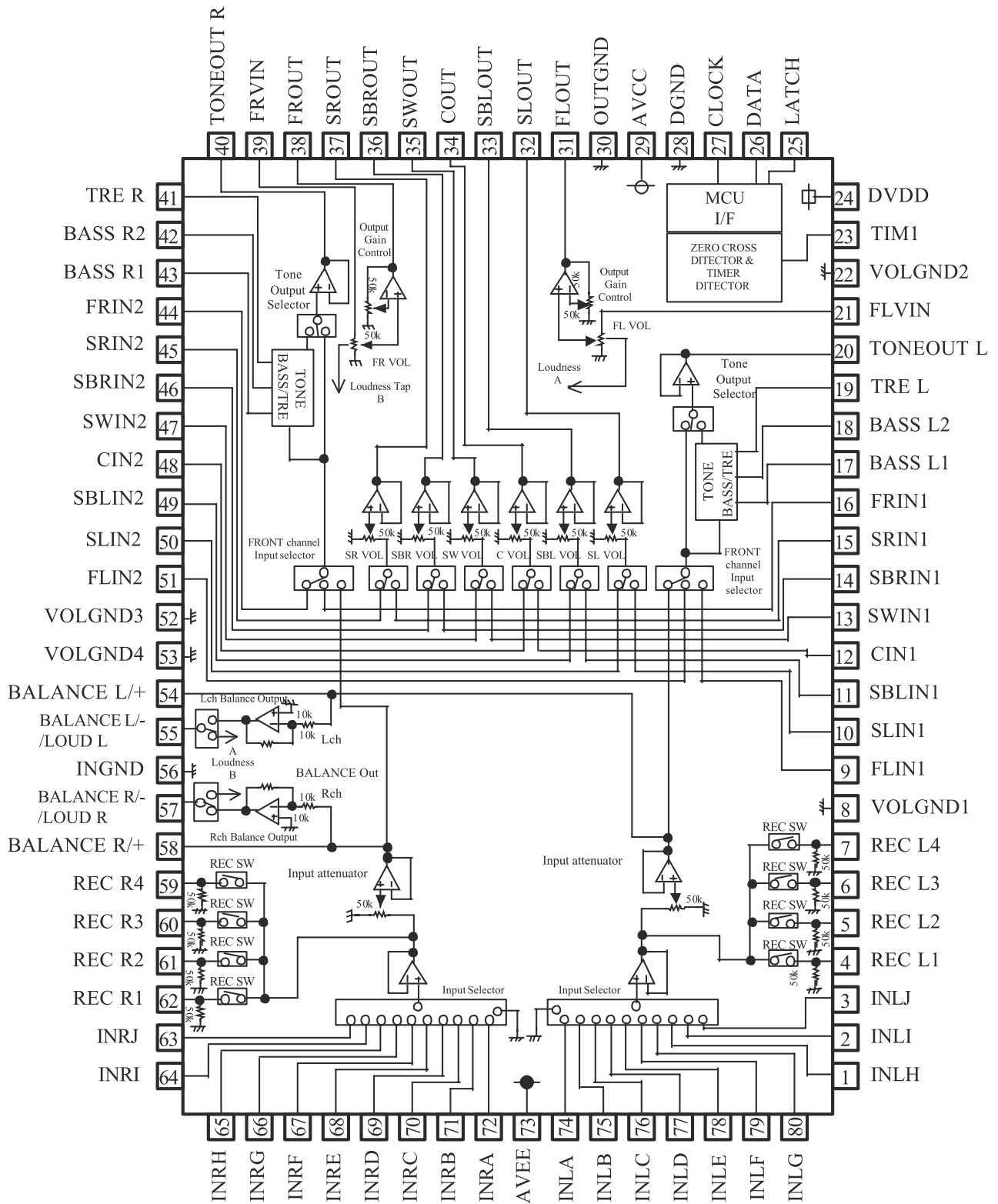
74HC4052
COMPONENT VIDEO BOARD: U4302 & U4303

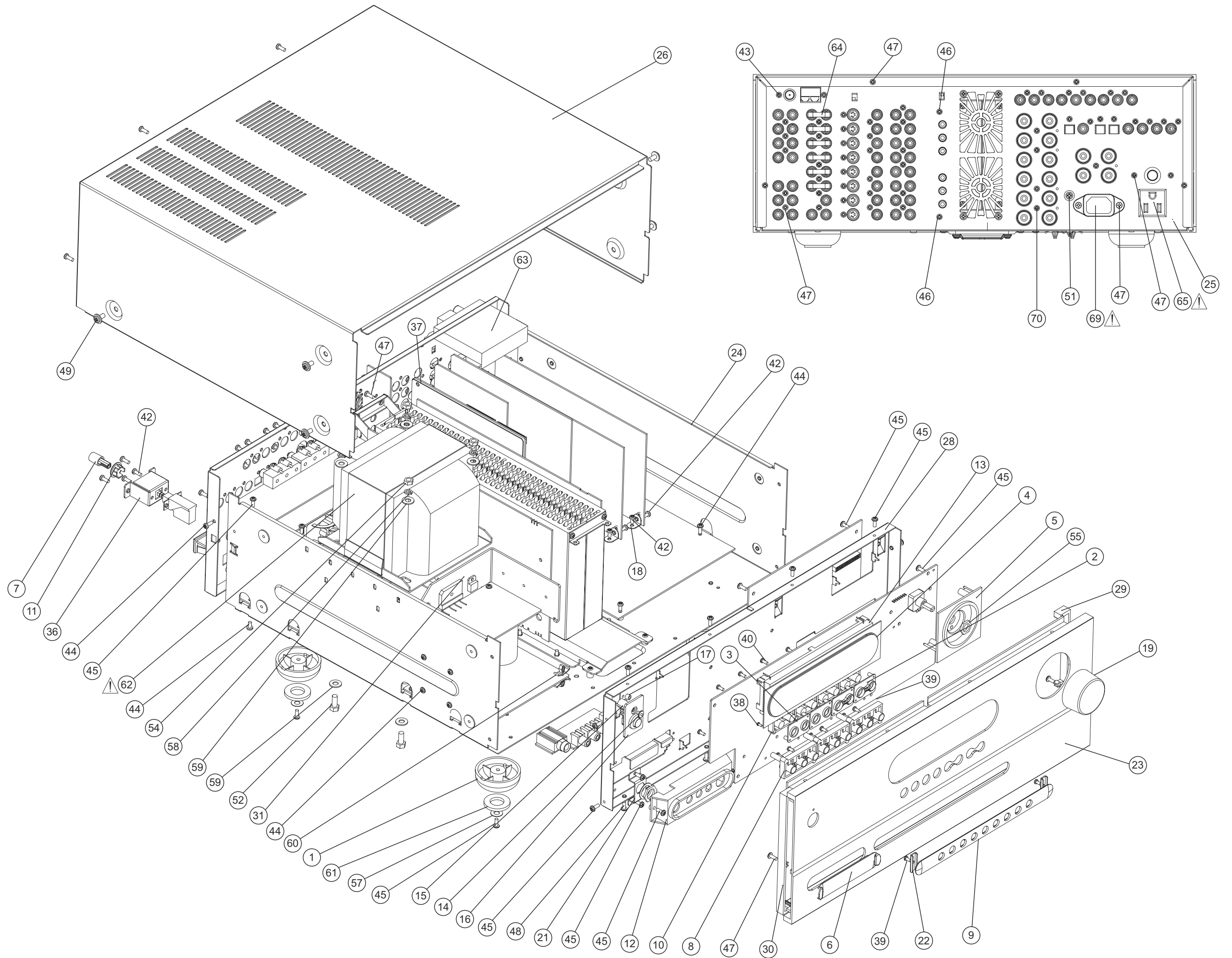


LC74763
S-VIDEO BOARD:
U4101

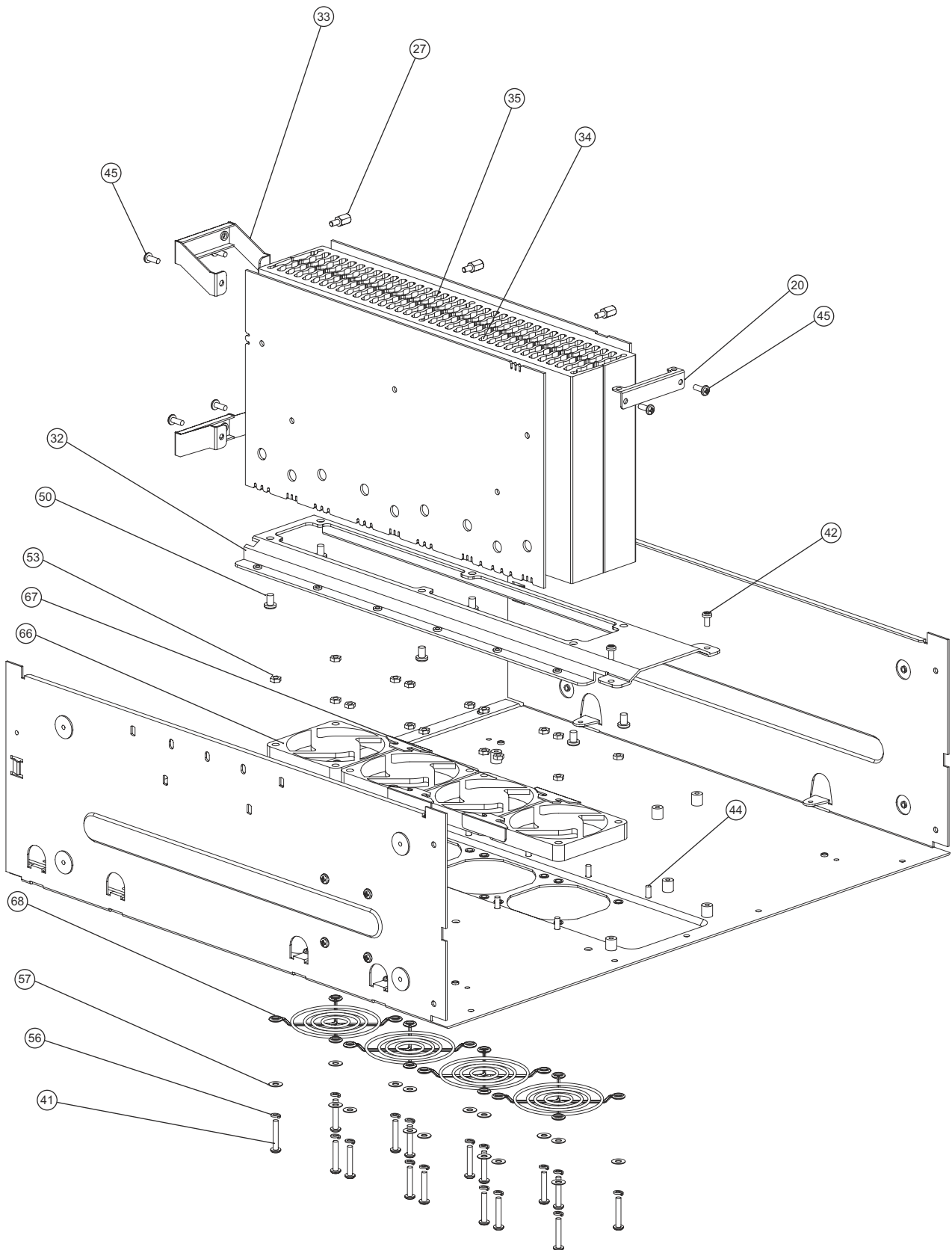


M61516FP **MULTI-CHANNEL BOARD: U6101 & U6102**





EXPLODED VIEW



EXPLODED VIEW PARTS LIST

<u>Item</u>	<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
1	10-0163017-01-00	PLASTIC FOOT DOME SHAPE	4
2*AH,*C	10-0163045-72-00	LINKED GOGGLE BEZEL (GREY)	2
2*T	10-0163045-73-00	LINKED GOGGLE BEZEL (TITANIUM)	2
3*AH,*C	10-0163055-72-01	DUO GOGGLE BEZEL (GREY)	2
3*T	10-0163055-73-01	DUO GOGGLE BEZEL (TITANIUM)	2
4	10-0752001-00-10	WINDOW LENS	1
5*AH,*C	10-0752005-72-00	VOLUME BEZEL (GREY)	1
5*T	10-0752005-73-00	VOLUME BEZEL (TITANIUM)	1
6*AH,*C	10-0752007-72-00	VIDEO COVER (GREY)	1
6*T	10-0752007-73-00	VIDEO COVER (TITANIUM)	1
7	10-0752022-02-00	POWER BUTTON BLACK	1
8*AH,*C	10-0752032-72-01	INPUT BUTTON (GREY)	3
8*T	10-0752032-73-01	INPUT BUTTON (TITANIUM)	3
9*AH,*C	10-0752035-71-00	INPUT BUTTON LOZENGE	1
9*T	10-0752035-73-00	INPUT BUTTON LOZENGE (TITANIUM)	1
10*AH,*C	10-0752042-72-01	DUO BUTTON (GREY)	4
10*T	10-0752042-73-01	DUO BUTTON (TITANIUM)	4
11	10-0752045-01-00	POWER BUTTON BEZEL	1
12	10-0752065-01-00	VIDEO HOUSING	1
13	10-0752075-00-00	DISPLAY BRACKET	1
14	10-0772011-00-00	LED LENS ROUND	1
15*AH,*C	10-0772022-72-01	POWER BUTTON TACT ACTIVATE (GREY)	1
15*T	10-0772022-73-01	POWEER BUTTON TACT ACTIVATE (TITANIUM)	1
16*AH,*C	10-0772045-72-01	POWER BUTTON BEZEL (GREY)	1
16*T	10-0772045-73-01	POWER BUTTON BEZEL (TITANIUM)	1
17	11-0163035-80-00	METAL SPACER OD6 X ID3.2 X 4.5mm	2
18	11-0570075-80-01	L BRACKET	2
19*AH,C	11-0752002-72-00	VOLUME KNOB ASSY (GREY)	1
19*T	11-0752002-73-00	VOLUME KNOB ASSY (TITANIUM)	1
20	11-0752045-80-00	HEATSINK MOUNTING BRACKET	1
21	11-0752065-80-00	PHONE BRACKET	1
22	11-0752075-80-00	DUMMY BRACKET	2
23*AH,*C	11-0753000-95-12	FASCIA (GREY)	1
23*T	11-0753000-94-12	FASCIA (TITANIUM)	1
24	11-0753004-80-07	BOTTOM CHASSIS	1
25*AH	11-0753006-94-14	REAR PANEL	1
25*C,*T	11-0753016-94-10	REAR PANEL	1
26*AH	11-0753003-95-16	TOP COVER (GREY)	1
26*C	11-0753013-95-16	TOP COVER (GREY)	1
26*T	11-0753013-97-16	TOP COVER (SILVER)	1
27	11-0762005-80-00	HEX SPACER AF5.5 H8+6	10
28	11-0762025-80-02	SUBFASCIA	1
29*AH,*C	11-0762028-95-00	SIDE CAP L (GREY)	1
29*T	11-0762028-94-00	SIDE CAP L (TITANIUM)	1
30*AH,*C	11-0762038-95-00	SIDE CAP R (GREY)	1
30*T	11-0762038-94-00	SIDE CAP R (TITANIUM)	1
31	11-0762048-80-01	HEATSINK- RECTIFER	1
32	11-0762085-80-01	LARGE FAN MOUNTING BRACKET	1
33	11-0762095-14-00	HTSK SUPPORT BRACKET (BLACK)	2
34	11-0762098-94-02	NEW EXTRUDED HTSK LEFT	1
35	11-0762108-94-00	NEW EXTRUDED HTSK RIGHT	1

<u>Item</u>	<u>Part No.</u>	<u>Description</u>	<u>Qty.</u>
36	11-0772065-80-00	POWER BUTTON BRACKET	1
37	12-0763001-70-00	FIBER PAPER 133 X 150 X 0.8mm	1
38	13-0200502-22-00	SELF TAP SCREW 2X5 TYPE-B NI PLT	8
39	13-0260600-02-00	SELF TAP SCREW 2.6 X 6 P/H TYPE-A NI PLT	6
40	13-0260803-02-00	SELF TAP SCREW 2.6 X 8 B/H TYPE-A NI PLT	16
41	14-0300180-02-00	MACHINE SCREW M3 X 18 P/H NI PLT	16
42	14-0300600-02-00	MACHINE SCREW M3 X 6 P/H NI PLT	17
43	14-0300600-04-00	MACHINE SCREW M3 X 6 P/H BLK	2
44	14-0300600-52-00	SELF TAP SCREW 3 X 6 P/H NI-PLT TYPE-B	20
45	14-0300800-53-00	SELF TAP SCREW 3 X 8 B/B ZINC PLATED	34
46	14-0300803-04-00	MACHINE SCREW M3 X 8 B/H BLACK	2
47	14-0300803-54-00	TAPTITE SCREW 3 X 8 B/H TYPE-B BLK PLT	60
48	14-0350803-52-00	TAPTITE SCREW 3.5 X 8.0 B/H TYPE-B NI PLT	5
49	14-0400802-04-00	MACHINE SCREW M4 X 8 WASHER HEAD BLK	6
50	14-0400808-54-00	TAPTITE SCREW 4 X 8 C/H TYPE -B BLK	6
51	14-0401402-04-00	MACHINE SCREW M4 X 14 WAHER HEAD BLK	1
52	14-0501205-02-02	HEX HEAD SCREW M5 X 12 NI PLT	4
53	15-0300240-05-20	NUT M3 X 2.4mm	16
54	15-0500340-08-20	NUT M5X3.4 NI PLT	4
55	15-0900220-11-30	NUT ZINC PLATED M9.0 X 2.2mm 11p	1
56	16-0320560-09-20	SPRING WASHER I/D 3.2 X O/D 5.6 0.9mm THK	35
57	16-0350080-04-35	STEEL WASHER I/D 3.5 X O/D 8.0 0.4mm ZINC PLT	22
58	16-0520080-12-30	SPRING WASHER I/D 5.2 X O/D 8 X 1.2 ZINC PLT	4
59	16-0561200-10-20	STEEL WASHER I/D 5.6 X O/D 12 X 1 NI PLT	8
60	17-0500960-00-01	PCB SUPPORTER H=9.6mm PCB HOLE 4mm	3
61	17-1402603-30-22	RUBBER FOOT I/D14 X O/D26 X 3	4
62 ⚠	25-0220057-30-18	XFORMER PW EI-114 115V/230V T06675A	1
63*AH	29-4000004-00-38	AM/FM TUNER MODULE KST-MB114MA0-23	1
63*C,*T	29-4000002-00-38	AM/FM TUNER MODULE KST-MB114MA1-23	1
64	34-0061030-00-67	JUMPER PLUG PITCH 14mm	6
65*AH ⚠	34-0101003-00-63	AC OUTLET 3 PINS US POLARIZED SS-6B-1-NY	1
65*C,*T ⚠	34-0100002-00-78	AC OUTLET EURO CEE 7 2.5A/250V A302D0060P	1
66	37-2011230-00-63	FAN DC 12V 0.09A 3000RPM W/450mm CONNECTOR	2
67	37-2011230-01-63	FAN DC 12V 0.09A 3000RPM W/350mm CONNECTOR	2
68	39-0000008-00-63	FAN GUARD 60mm DFG-60	4
69 ⚠	34-0101000-00-67	AC SOCKET IEC 15A/250V	1
70	14-0301000-54-00	TAPTITE SCREW 3 X 10 P/H TYPE-B BLK	7

NOTE:


THE COMPONENTS IDENTIFIED BY ⚠ MARK ARE CRITICAL FOR RISK OF FIRE AND ELECTRICAL SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

<*AH > : USA, CANADIAN MODEL ONLY.

<*C > : EUROPEAN MODEL ONLY.

<*T > : EUROPEAN MODEL WITH TATANIUM COLOUR ONLY,
ALL ELECTRICAL ARE SAME AS *C VERSION.

ELECTRICAL PARTS LIST (refer to schematic diagram for non critical component values)

Reference No.	Part No.	Description
POWER AMP MODULE	95-0907535-12-01	POWER AMPLIFIER MODULE
FRONT & CENTER AMP BOARD PCB ASSEMBLY	80-0907530-40-00	FRONT AND CENTER AMP ASSEMBLY
CAPACITORS		
C501,C513,C525	22-3476052-00-43	CAP ELEC SS 4.7uF 50V 20%
C503,C515,C527	22-4110203-10-28	CAP MYLAR MCC-R 1000P 100V 10%
C505,C517,C529	22-3471022-00-28	CAP ELEC GR 470uF 16V 20%
C508,C519,C531	22-4115403-10-10	CAP MYLAR KT-G 150nF 100V 10%
C510,C511,C521,C522,C534,C535	22-3101082-00-28	CAP ELEC GR 100uF 100V 20%
C537-C539	22-4210402-00-31	CAP MPF 0.1uF 63V 5%
C565,C566	22-3470022-00-43	CAP ELEC SS 47uF 16V 20%
DIODES		
D501-D503,D505-D507,D509-D514, D522-D528,D531-D536	20-0000000-00-13	DIODE SW 4NS DO35 1N4148
D529,D530	20-3222002-02-01	DIODE ZENER BZX55 22V 1/2W 5%
COILS		
L501-L503	24-1000001-00-28	AIR COIL 0.2uH 10%
RELAY		
M501,M502,M505	32-3124051-03-40	RELAY POWER DC24V 5A/250V 2P1T
THERMISTORS		
M504,M507	23-6110100-00-08	PTC 100 OHM PTH9MO4BH471TS2F333
THERMAL PROTECTOR		
M506 	39-0000007-00-15	THERMAL CUT OFF SWITCH 90C UP72
TRANSISTORS		
Q501-Q503,Q511,Q513-Q515,Q523, Q525-Q527,Q535	21-0000410-00-12	XTR SS NPN HFE160-320 130MHz 2SC2362KF
Q504,Q506,Q516,Q518,Q529,Q530, Q562,Q565,Q568	21-1011210-50-12	XTR PW PNP 1A/100V TO-126 2SD600KE
Q505,Q508,Q517,Q520,Q528,Q532	21-1011611-30-12	XTR PW PNP 1.5A/160V TO-220ML 2SA1606E
Q507,Q519,Q531	21-1011610-30-12	XTR PW NPN 1.5A/160V TO-220ML 2SC4159E
Q509,Q521,Q534	21-1152311-10-12	XTR PW PNP 15A/230V TO-3PB 2SA2031
Q510,Q522,Q533	21-1152310-10-12	XTR PW NPN 15A/230V TO-3PB 2SC5669
Q543-Q545	21-0000380-70-14	XTR SS NPN HFE20 250MHz DTC-123ESA
Q550,Q551,Q553,Q554,Q556,Q557, Q561,Q564,Q567	21-0100410-00-12	XTR SS PNP HFE 280-560 110MHz 2SA1016KG-AA
Q563,Q566,Q569	21-1011211-50-12	XTR PW PNP 1A/100V TO-126 2SB631KE
RESISTORS		
R522,R545,R571	30-0102106-01-64	VR SEMI-FIX RES CF 1K OHM B 30%
R523,R547,R574	23-4228280-08-20	RES RN 0.22 OHM 5% 5W SIL 3 PIN

<u>Reference No.</u>	<u>Part No.</u>	<u>Description</u>
R527,R528,R548,R556,R575,R576 R589-R591	23-2100230-00-00 23-2100250-00-01	RES MO 10 OHM 5% 1/2W RES MO 10 OHM 5% 2W
<u>SURROUND LEFT/RIGHT/BACK AMP BOARD PCB ASSEMBLY</u>	80-0907530-18-00	SURROUND LEFT/RIGHT/BACK AMP ASSEMBLY
<u>CAPACITORS</u>		
C554	22-3220022-00-43	CAP ELEC GS 22uF 16V 20%
C801,C802,C835	22-3476052-00-43	CAP ELEC SS 4.7uF 50V 20%
C805,C806,C836	22-4110203-10-28	CAP MYLAR MCC-R 1000P 100V 10%
C809,C810,C837,C874,C875	22-3471022-00-28	CAP ELEC GR 470uF 16V 20%
C815,C816,C840	22-4115403-10-10	CAP MYLAR KT-G 150nF 100V 10%
C819-C822,C842,C843	22-3101082-00-28	CAP ELEC GR 100uF 100V 20%
C823,C824,C844	22-4210402-00-31	CAP MPF 0.1uF 63V 5%
C871,C873	22-3470052-00-43	CAP ELEC SS 47uF 50V 20%
C872	22-3100052-00-43	CAP ELEC SS 10uF 50V 20%
<u>DIODES</u>		
D801-D809,D814-D818,D820-D825, D871-D874,D880-D883	20-0000000-00-13	DIODE SW 4NS DO35 1N4148
D879,D878	20-3133912-20-36	DIODE ZENER BZX85 3.3V 1W 5%
<u>COILS</u>		
L801,L802,L803	24-1000001-00-28	AIR COIL 0.2uH 10%
<u>RELAYS</u>		
M801,M802	32-3124081-02-40	RELAY POWER DC24V 8A/250V 2P1T
<u>TRANSISTORS</u>		
Q512,Q807,Q808,Q823,Q824,Q826, Q827,Q834,Q835,Q837	21-0100410-00-12	XTR SS PNP HFE 280-560 110MHz 2SA1016KG-AA
Q545,Q546,Q801-Q806,Q821,Q822, Q838-Q840,Q847	21-0000410-00-12	XTR SS NPN HFE160-320 130MHz 2SC2362KF
Q809-Q812,Q841,Q842,Q854,Q856,Q858	21-1011210-50-12	XTR PW PNP 1A/100V TO-126 2SD600KE
Q813,Q814,Q843	21-1011610-30-12	XTR PW NPN 1.5A/160V TO-220ML 2SC4159E
Q815,Q816,Q844,Q850-Q852	21-1011611-30-12	XTR PW PNP 1.5A/160V TO-220ML 2SA1606E
Q817,Q818,Q845	21-1152310-10-12	XTR PW NPN 15A/230V TO-3PB 2SC5669
Q819,Q820,Q846	21-1152311-10-12	XTR PW PNP 15A/230V TO-3PB 2SA2031
Q829,Q848	21-0000380-70-14	XTR SS NPN HFE20 250MHz DTC-123ESA
Q855,Q857,Q859	21-1011211-50-12	XTR PW PNP 1A/100V TO-126 2SB631KE
Q871	21-1036003-50-06	XTR PW 3A/60V TO-126 2SB772Q
Q872	21-0000390-70-14	XTR SS NPN HFE270-560 180MHz 2SC1740S
<u>RESISTORS</u>		
R8103,R843,R844	23-4228280-08-20	RES RN 0.22 OHM 5% 5W SIL 3 PIN

<u>Reference No.</u>	<u>Part No.</u>	<u>Description</u>
R8110,R857,R858 R829,R830,R837,R838,R894,R898 R835,R836,R897	23-2100250-00-01 23-2100230-00-00 30-0102106-01-64	RES MO 10 OHM 5% 2W RES MO 10 OHM 5% 1/2W VR SEMI-FIX RES CF 1K OHM B 30% 6mm
ICs U871 U872	27-3001201-17-14 27-3000501-17-14	I.C. VOLT REG 12V 1A NJM7812 I.C. VOLT REG 5V 1A NJM7805FA
DSP BOARD PCB ASSEMBLY	80-0907530-65-00	DSP ASSEMBLY
CAPACITORS C1137-C1140,C1079,C1080,C1092 C1012,C1072,C1117 C1119,C1133,C1157 C1002,C1004,C1083,C1096,C1098,C1100 C1011 C1145-C1148 C1005 C1020,C1021,C1030,C1031,C1040, C1041,C1050,C1051 C1109-C1113 C1060,C1073 C1101-C1108 C1132 C1007,C1010 C1003,C1001,C1017-C1019,C1074- C1076,C1078,C1081,C1095,C1097, C1099,C1123-C1128,C1115,C1141,C1142 C1121 C1006,C1022,C1026,C1032,C1036, C1042,C1046,C1052,C1056,C1130, C1131,C1134-C1136,C1143,C1144 C1151 C1025,C1029,C1035,C1039,C1045, C1049,C1055,C1059,C1114 C1024,C1028,C1034,C1038,C1044, C1048,C1054,C1058,	22-3100022-00-43 22-3101022-00-43 22-3102022-00-28 22-3106052-00-43 22-3107052-00-43 22-3220022-00-43 22-3226052-00-43 22-3336052-00-43 22-3470022-00-43 22-3471022-00-28 45-0101055-55-57 45-0102055-55-57 45-0103055-55-57 45-0104056-57-57 45-0221055-55-57 45-0222055-55-57 45-0331055-55-57 45-0472055-55-57 45-0561055-55-57	CAP ELEC SS 10uF 16V 20% CAP ELEC SS 100uF 16V 20% CAP ELEC GR 1000uF 16V 20% CAP ELEC SS 1uF 50V 20% CAP ELEC. SS 0.1uF 50V 20% CAP ELEC GS 22uF 16V 20% CAP ELEC SS 2.2uF 50V 20% CAP ELEC SS 3.3uF 50V 20% CAP ELEC SS 47uF 16V 20% CAP ELEC GR 470uF 16V 20% CAP CER SMD 100pF 50V 10% CAP CER SMD 1nF 50V 10% CAP CER SMD 10nF 50V 10% CAP CER SMD 0.1uF 50V 20% CAP CER SMD 220pF 50V 10% CAP CER SMD 2.2nF 50V 10% CAP CER SMD 330pF 50V 10% CAP CER SMD 4.7nF 50V 10% CAP CER SMD 560pF 50v 10%
INDUCTORS L1001-L1007	24-0100127-00-28	IND CHOKE 10uH 10%
TRANSISTORS Q1001-Q1003	21-0000010-00-46	XTR SS NPN HEF 100 200MHz TO-92 C1815Y
RESISTORS R1001,R1002,R1079,R1083,1097, R1098,R1101 R1003-R1006,R1081 R1007	44-0470120-51-00 44-0330120-51-00 44-0330920-51-00	RES SMD 4.7K OHM 5% 1/16W 0603 RES SMD 3.3K OHM 5% 1/16W 0603 RES SMD 33 OHM 5% 1/16W 0603

<u>Reference No.</u>	<u>Part No.</u>	<u>Description</u>
R1008,R1020-R1022,R1026,R1036, R1040,R1050,R1054,R1064,R1068, R1095,R1096,R1099,R1100,R1114, R1117-R1120,R1131-R1138,R1230	44-0100220-51-00	RES SMD 10K OHM 5% 1/16W 0603
R1009	44-0200320-51-00	RES SMD 200K OHM 5% 1/16W 0603
R1010,J1001	44-0000020-51-00	RES SMD 0 OHM 5% 1/16W 0603
R1013	44-0120120-51-00	RES SMD 1.2K OHM 5% 1/16W 0603
R1023,R1027,R1028,R1030,R1033, R1035,R1037,R1041,R1042,R1044, R1047,R1049,R1051,R1055,R1056, R1058,R1061,R1063,R1065,R1069, R1070,R1072,R1075,R1077	44-0150120-51-00	RES SMD 1.5K OHM 5% 1/16W 0603
R1078,R1080,R1084	44-0220120-51-00	RES SMD 2.2K OHM 5% 1/16W 0603
R1082	44-0180120-51-00	RES SMD 1.8K OHM 5% 1/16W 0603
R1090,R1091	44-0270120-51-00	RES SMD 2.7K OHM 5% 1/16W 0603
R1092-R1094,R1115	44-0100020-51-00	RES SMD 100 OHM 5% 1/16W 0603
R1121-R1124	44-0150020-51-00	RES SMD 150 OHM 5% 1/16W 0603
R1141-R1148	44-0620020-51-00	RES SMD 620 OHM 5% 1/16W 0603
R1151	44-0100120-51-00	RES SMD 1K OHM 5% 1/16W 0603
ICs		
U1001	27-9493260-04-70	I.C. DD DTS & MPEG DECODER PLCC CS49326
U1002,U1003,U1014	27-0324590-24-00	I.C. OCTAL BIDIRECTIONAL TRANS CEIVER SMD 74LVC245ATTR
U1004	27-0115790-25-00	I.C. QUAD 2-I/P SELECTOR SOIC 74HC157MIR
U1005	27-9841500-25-53	I.C. 96KHz DIGITAL AUDIO INTERFACE RECEIVER SMD CS8415A-CS
U1007	27-2325607-00-88	I.C. EEPROM 256 X 8 BYTE 70nS PDIL W27C02-70
U1007	34-6032000-00-99	IC SOCKET DIL 32 PINS FT
U1008,U1009	27-0657490-18-00	I.C. OCTAL D-FLIP FLOPS 3-STAGE O/P SMD 74LVQ574M
U1010-U1013,U1023,U1025	27-7055320-18-14	I.C. AUDIO LOW NOISE OP-AMP SMD NJM5532M
U1015,U1020	27-3031710-06-00	I.C. REG 1A TO-220(T) LM317T
U1021	27-9422800-24-53	I.C. 24BIT 96KHz SUR SOUND CODE SSOP CS4228AKS
U1022	27-9434000-25-53	I.C. 24BIT 96KHz STEREO DAC FOR AUDIO SOIC CS4340
OSCILLATOR		
X1001	28-5122200-04-19	OSCILLATOR 12.288MHz 50ppm
AUDIO BOARD		
PCB ASSEMBLY	80-0907530-11-00	AUDIO ASSEMBLY
CAPACITORS		
C3101-C3116	22-3220022-00-43	CAP ELEC GS 22uF 16V 20%
RCA JACKS		
M303	34-4040420-00-60	RCA JACK 4 R-R/W-W PCB MOUNT
M301,M302	34-4060420-00-60	RCA JACK 6 R-R-R/W-W-W PCB MOUNT

<u>Reference No.</u>	<u>Part No.</u>	<u>Description</u>
RESISTORS J3101,J3102	44-0000027-11-00	RES SMD 0 OHM 5% 1/10W 0805
COMPONENT VIDEO BOARD PCB ASSEMBLY	80-0907530-42-00	COMPONENT VIDEO ASSEMBLY
CAPACITORS C4301-C4306 C4310,C4311,C4312,C4325 C4313-C4315 C4316,C4318,C4320 C4317,C4319,C4321	22-3226052-00-43 22-3100022-00-43 22-3106052-00-43 22-3101022-00-43 22-3220022-00-43	CAP ELEC SS 2.2uF 50V 20% CAP ELEC SS 10uF 16V 20% CAP ELEC SS 1uF 50V 20% CAP ELEC SS 100uF 16V 20% CAP ELEC GS 22uF 16V 20%
DIODE D4301,D4302	20-0000000-00-13	DIODE SW 4NS DO35 1N4148
RESISTORS J4301,J4302,J4303	44-0000027-11-00	RES SMD 0 OHM 5% 1/10W 0805
RCA JACK M431,M432,M434	34-4032020-00-60	RCA 3 G-BL-R PCB MOUNT
ICs U4301 U4302,U4303	27-5176600-18-23 27-0140520-18-00	I.C. VIDEO 3-CH75 OHM DRIVER BA7660FS I.C. SINGLE DUAL TRIPLE M74HC4052MIR
DIGITAL BOARD PCB ASSEMBLY	80-0907530-47-00	DIGITAL ASSEMBLY
CAPACITORS C1222,C1223 C1213,C1214,C1221 C1232-C1235	22-3101022-00-43 22-3226052-00-43 45-0221055-55-57	CAP ELEC SS 100uF 16V 20% CAP ELEC SS 2.2uF 50V 20% CAP CER SMD 220pF 50V 10%
RCA JACKS J1001-J1004,J1007	34-4010320-00-60	RCA JACK 1 BLACK PCB MOUNT
FIBRE OPTICAL J1005,J1006 J1008	26-6701380-01-16 26-6691386-00-16	OPTIC RECEIVING UNIT GP1FA550RZ OPTIC TRANSMITTER GP1FA550TZ
ICs U1201,U1202 U1203	27-0804990-18-00 27-0125190-18-00	I.C. HEX INVERTER M74HCU04MIR I.C. 8-CH MULTIPLEXER 74HC251M1R
ISC BOARD PCB ASSEMBLY	80-0907530-74-00	ISC ASSEMBLY


<u>Reference No.</u>	<u>Part No.</u>	<u>Description</u>
CAPACITORS C786-C789,C816-C820 C811,C829,C830,C832,C833 DIODES D810 D811,D812 D813,D823 D821,D822 TRANSISTORS Q781,Q782 Q812,Q831,Q833 Q832,Q830 RESISTORS R793,R790, R837-R839 R841,R840 R881 ICs U801 KEYBOARD PCB ASSEMBLY CAPACITORS C208-C211 C212 C214 C223 C224 C255 C241,C242 C201,C202,C213,C215-C222,C229,C256 C251-C254 IR RECEIVER D201 DIODES D212,D214-D218 D220 ENCODER M201	22-4210402-00-31 22-3100022-00-43 20-5010401-50-47 20-1912601-90-45 20-0000000-00-13 20-3212002-00-36 21-0100410-00-12 21-0000010-00-46 21-0100100-00-46 23-4228280-08-20 23-5228330-00-00 23-2228232-00-00 30-0503106-02-22 27-7055320-18-14 80-0907530-02-00 22-3470022-00-43 22-3102012-00-28 22-3107052-00-43 22-1103150-17-39 22-3222032-00-34 22-3106052-00-43 45-0102055-55-57 45-0104056-57-57 45-0330054-52-57 26-0941380-00-00 20-0000000-00-13 20-3251902-00-01 35-6001219-00-08	CAP MPF 0.1uF 63V 5% CAP ELEC SS 10uF 16V 20% DIODE BRI 10A/400V KBK10G DIODE RECT 12A/600V TYN612 DIODE SW 4NS DO35 1N4148 DIODE ZENER BZX55 12V 1/2W 5% XTR SS PNP HFE 280-560 110MHz 2SA1016KG-AA XTR SS NPN HEF 100 200MHz TO-92 C1815Y XTR SS PNP HFE 100 200MHz TO-92 A1015Y RES RN 0.22 OHM 5% 5W SIL 3 PIN RES FUSIBLE 0.22 OHM 10% 1/2W RES MO 0.22 OHM 5% 1/2W VR SEMI-FIXED RESISTOR CF 50K OHM 30% B 6mm I.C. AUDIO LOW NOISE OP-AMP NJM5532M KEYBOARD ASSEMBLY CAP ELEC SS 47uF 16V 20% CAP ELEC GR 1000uF 10V 20% CAP ELEC. SS 0.1uF 50V 20% CAP CER KK 10nF 50V 10% CAP ELEC GS 2200uF 25V 20% CAP ELEC SS 1uF 50V 20% CAP CER SMD 1nF 50V 10% CAP CER SMD 0.1uF 50V 20% CAP CER SMD 33pF 50V 5% IR RX 940nm 37.9KHz ST FM-7138TE5 DIODE SW 4NS DO35 1N4148 DIODE ZENER BZX55 5.1V 1/2W 5% ENCODER ROTATRY L=20mm VER W/O CLICK

<u>Reference No.</u>	<u>Part No.</u>	<u>Description</u>
TRANSISTORS		
Q201	21-0100100-00-46	XTR SS PNP HFE 100 200MHz TO-92 A1015Y
Q203-Q206	21-0000010-00-46	XTR SS NPN HEF 100 200MHz TO-92 C1815Y
RESISTORS		
R201-R207,R213,R219,R223,R224, R226,R227,R229,R231,R232	44-0100220-51-00	RES SMD 10K OHM 5% 1/16W 0603
R216,R225,R234	44-0100120-51-00	RES SMD 1K OHM 5% 1/16W 0603
R217,R218	44-0150120-51-00	RES SMD 1.5K OHM 5% 1/16W 0603
R220	44-0470120-51-00	RES SMD 4.7K OHM 5% 1/16W 0603
R221,R230	44-0220120-51-00	RES SMD 2.2K OHM 5% 1/16W 0603
R222	44-0220020-51-00	RES SMD 220 OHM 5% 1/16W 0603
R233	44-0470220-51-00	RES SMD 47K OHM 5% 1/16W 0603
R238	44-0120220-51-00	RES SMD 12K OHM 5% 1/16W 0603
R241,R242	44-0100020-51-00	RES SMD 100 OHM 5% 1/16W 0603
R251,R252	44-0100520-51-00	RES SMD 10M OHM 5% 1/16W 0603
R253	44-0000020-51-00	RES SMD 0 OHM 5% 1/16W 0603
TACT SWITCHES		
S201-S219	35-1001117-00-67	SW TACT NO 1P1T 50mA/12V VER H=7mm
ICs		
U201,U202	27-1086400-04-87	I.C. MCU 8 BIT 64KROM 512 BYTE SRAM PLCC M6759-A1F
U203	27-9630600-14-62	I.C. VFD DRIVER SMD QFP PT6306
U204-U207,U211	27-0540940-18-00	I.C. 8-STAGE SHIFT-AND-STORE BUS REGISTER HCF4094BM1
U208	27-0140510-18-00	I.C. SINGLE 8 CH ANALOG MUX/ DEMUX SMD M74HC4051MIR
U209	27-0324591-18-00	I.C. OCTAL BUS TRANSCEIVER 74VHC245M
U210	27-2300225-00-25	I.C. EEPROM 2K BYTE 250nS AT24C16
U214	27-9810000-28-36	I.C. MCU RESET MONITORS TCM810LENB713
VFD		
VD201	41-4340100-00-13	VFD 16-BT-93GNK
CRYSTALS		
X201,X202	28-5400200-06-33	CRYSTAL 40MHz 30ppm HC-49S
LED BOARD		
PCB ASSEMBLY	80-0907530-32-00	LED ASSEMBLY
LED		
D211	26-0012587-01-10	LED RED-GREEN 5X807mm COMMON ANODE
TACT SWITCHES		
S220	35-1001117-00-67	SW TACT NO 1P1T 50mA/12V VER H=7mm

<u>Reference No.</u>	<u>Part No.</u>	<u>Description</u>
<u>MAIN BOARD</u> <u>PCB ASSEMBLY</u>	80-0907530-00-00	MAIN ASSEMBLY
<u>CAPACITORS</u> C701,C704 C705,C706,C716,C725 C707 C710 C711-C713 C715 C719,C723,C702 C721,C724	22-3332042-30-35 22-3102032-30-28 22-3222042-30-49 22-3470052-00-43 22-3102052-30-28 22-4210502-00-31 22-3101022-30-13 22-3222032-30-28	CAP ELEC KM 3300uF 35V 20% 105C CAP ELEC KM 1000uF 25V 20% 105C CAP ELEC KM 2200uF 35V 20% 105C CAP ELEC SS 47uF 50V 20% 85C CAP ELEC KM 1000uF 50V 20% 105C CAP MPF 1uF 63V 5% DMF 5 SERIES CAP ELEC KM 100uF 16V 20% 105C CAP ELEC KM 2200uF 25V 20% 105C
<u>DIODES</u> D701-D710 D711 D715 D716-D718	20-1001401-20-44 20-3203102-00-01 20-5004700-50-02 20-3951943-50-01	DIODE RECT 1A/400V DO41 1N4004 DIODE ZENER BZX55 30V 1/2W 5% DIODE BRI 4A/70V RS402L DIODE ZENER ZY5.1 2W 10%
<u>TRANSISTORS</u> Q701	21-1011210-50-12	XTR PW PNP 1A/100V TO-126 2SD600KE
<u>ICs</u> U701,U704-U706 U702,U707 U703	27-3000501-17-14 27-3001201-17-14 27-3101201-13-14	I.C. VOLT REG 5V 1A NJM7805F I.C. VOLT REG 12V 1A NJM7812 I.C. VOLT REG TO-220F NJM7912
<u>MULTI-CH BOARD</u> <u>PCB ASSEMBLY</u>	80-0907530-64-00	MULTI-CHANNEL ASSEMBLY
<u>CAPACITORS</u> C607,C611,C612,C6201-C6218 C626 C627,C628,C633,C634 C677,C678,C689,C690 C755,C756,C775,C776 C757,C758 C759-C762,C769,C770,C773,C774 C763-C766 C767,C768,C771,C772 C6301-C6304	22-3220022-00-43 22-3221022-00-43 22-3101022-00-43 22-3470022-00-43 22-8226052-00-28 22-4282302-00-31 22-4210402-00-31 22-4247302-00-31 22-4233202-00-31 45-0104056-57-57	CAP ELEC GS 22uF 16V 20% CAP ELEC SS 220uF 16V 20% CAP ELEC SS 100uF 16V 20% CAP ELEC SS 47uF 16V 20% CAP ELEC 2.2uF 50V 20% CAP MPF 0.082uF 63V 5% CAP MPF 0.1uF 63V 5% CAP MPF 0.047uF 63V 5% CAP MPF 0.0033uF 63V 5% CAP CER SMD 0.1uF 50V 20%
<u>DIODES</u> D601 D602,D604	20-0000000-00-13 20-3275902-00-01	DIODE SW 4NS DO35 1N4148 DIODE ZENER BZX55 7.5V 1/2W 5%
<u>INDUCTORS</u> L6101,L6102	24-0101108-00-28	IND CHOKE 100uH 10%

<u>Reference No.</u>	<u>Part No.</u>	<u>Description</u>
RCA JACKS		
M6101,M6103	34-4060420-00-60	RCA JACK 6 R-R-R/W-W-W PCB MOUNT
M6102	34-4020320-00-60	RCA JACK 2 B/B PCB MOUNT
TRANSISTORS		
Q6101	21-0000140-00-11	XTR SS NPN HFE 120 100MHz TO-92 SS8050C
Q6102	21-0100131-00-11	XTR SS PNP HFE 170 1.5A TO-92 SS8550C
Q6103	21-0100390-70-14	XTR SS PNP HFE 30 250MHz SPT DTA 114ESA
Q6104	21-0000400-70-14	XTR SS NPN HFE30 250MHz SPT DTC114ESA
Q6105,Q6106	21-0000360-00-00	XTR SS NPN HFE200-700 30MHz 2SC2878A
ICs		
U6101,U6102	27-7661516-14-01	I.C. SOUND PROCESSOR 7.1CH VOL+TONE SMD QFP M61516FP
U6104-U6107	27-7055320-18-14	I.C. AUDIO LOW NOISE OP-AMP NJM5532M
PRE-OUT BOARD PCB ASSEMBLY		
	80-0907530-63-00	PRE-OUT ASSEMBLY
CAPACITORS		
C637,C642,C647,C652,C657,C662,C667,C672,C700,C705	22-3100022-00-43	CAP ELEC SS 10uF 16V 20%
C640,C645,C650,C655,C660,C665,C670,C675,C703,C708	22-3220022-00-43	CAP ELEC GS 22uF 16V 20%
C679,C680,C691,C692	22-3470022-00-43	CAP ELEC SS 47uF 16V 20%
C684-C688,C699	22-3331022-00-28	CAP ELEC GR 330uF 16V 20%
DIODES		
D605-D614	20-0000000-00-13	DIODE SW 4NS DO35 1N4148
INDUCTORS		
L602,L603,L604,L605,L606,L607,L608,L609	24-0100127-00-28	IND CHOKE 10uH 10%
RCA JACKS		
M607,M609	34-4040500-00-60	RCA JACK 4 R-W/R-W PCB MOUNT
M608,M612	34-4020300-00-60	RCA JACK 2 B/B PCB MOUNT
M610	34-4020200-00-60	RCA JACK 2 W/W PCB MOUNT
M611	34-4010100-00-60	RCA JACK 1 RED PCB MOUNT
TRANSISTORS		
Q608-Q615,Q617,Q629,Q630,Q632,Q633	21-0000350-70-00	XTR SS NPN HFE200-700 30MHz SPT RN1241A
Q616,Q618,Q620,Q622,Q624,Q631	21-0100390-70-14	XTR SS PNP HFE 30 250MHz SPT DTA 114ESA

<u>Reference No.</u>	<u>Part No.</u>	<u>Description</u>
RESISTORS R635,R642,R647,R654,R659,R666, R678,R688-R692,R694,R701,R705 R636,R643,R648,R655,R660,R667, R672,R679,R695,R702	23-1220102-00-00 23-1330002-00-00	RES MF 2.2K OHM 1% 1/6W RES MF 330 OHM 1% 1/6W
ICs U609-U613	27-7055320-18-14	I.C. AUDIO LOW NOISE OP-AMP NJM5532M
PSU BOARD PSU ASSEMBLY*AH PSU ASSEMBLY*C	80-0907530-01-00 80-0907530-01-01	PSU ASSEMBLY PSU ASSEMBLY
CAPACITORS C752 C753 C763	22-3476052-00-43 22-4210202-00-31 22-1103960-37-71	CAP ELEC SS 4.7uF 50V 20% CAP MPF 0.001uF 63V 5% CAP CER 0.01uF 250VAC 20%
DIODES D751,D756 D752,D753,D754,D755	20-0000000-00-13 20-1001401-20-44	DIODE SW 4NS DO35 1N4148 DIODE RECT 1A/400V DO41 1N4004
FUSES F751*AH F751*C F752*AH F752*C	33-0191001-00-88 33-0181006-00-88 33-0111006-00-88 33-0151006-00-88	FUSE 10A/250VAC TIME-LAG 5X20mm UL/CSA 5T FUSE 6.3A/250VAC TIME-LAG 5X20mm VDE/UL/CSA 5T FUSE 1.6A 250V TIME LAG 5x20mm 5T UL/CSA/VDE/SEMKO FUSE 800mA 250V TIME LAG 5x20mm 5T UL/CSA/VDE/SEMKO
RELAY M751	32-1212100-01-97	RELAY MINIATURE 2P1T SDT-S- 112DMR
TRANSISTORS Q751	21-0000010-00-46	XTR SS NPN HEF 100 200MHz TO-92 C1815Y
RESISTORS R751 R754*AH	23-5228330-00-00 23-8395232-00-25	RES FUSIBLE 0.22 OHM 10% COND PATH RESISTOR 3.9M OHM 1/2W 5%
STANDBY TRANSFORMER T751	25-0040021-31-18	XFOFMER PW EI-35 100V/220V T05382B
POWER SWITCH BOARD PCB ASSEMBLY	80-0907530-48-00	POWER SWITCHASSEMBLY
CAPACITOR C764	22-1103960-37-71	CAP CER 0.01uF 250VAC 20%

<u>Reference No.</u>	<u>Part No.</u>	<u>Description</u>
POWER SWITCH S751 	35-0101109-00-67	SW POWER TV-8 10A 250VAC PS3-22SPA-P7AZ
SECONDARY BOARD PCB ASSEMBLY	80-0907530-27-00	SECONDARY ASSEMBLY
CAPACITORS C801,C802	22-3123072-00-41	CAP ELEC LP 12000uF 80V 20%
BRIDGE RECTIFIER D801	20-5125401-50-02	BRIDGE RECTIFIER 25A 400V MP254W BR-25W
SPEAKER A BOARD PCB ASSEMBLY	80-0907530-67-00	SPEAKER A ASSEMBLY
SPEAKER TERMINAL M5101,M8101	34-3000021-00-80	SPEAKER TERMINAL 6P BINDING R/B
SPEAKER B BOARD PCB ASSEMBLY	80-0907530-67-01	SPEAKER B ASSEMBLY
SPEAKER TERMINAL M5102	34-3000022-00-80	SPEAKER TERMINAL 4P BINDING R/B
S-VIDEO BOARD PCB ASSEMBLY	80-0907530-26-00	S-VIDEO ASSEMBLY
CAPACITORS C4108,C4112,C4116,C4156,C4170, C4171,C4178,C4179 C4133,C4141 C4134,C4145,C4149,C4101-C4107, C4109-C4111,C4113-C4115,C4158 C4136,C4146 C4137,C4144 C4150 C4151 C4153,C4157 C4160,C4162,C4166,C4167 C4186 C4138	22-3471012-00-28 22-3106052-00-43 22-3101012-00-43 22-4247402-00-31 22-3477052-00-43 22-3470022-00-43 22-3100022-00-43 22-3226052-00-43 22-3221012-00-43 22-4247302-00-31 22-7200210-00-09	CAP ELEC GR 470uF 10V 20% CAP ELEC SS 1uF 50V 20% CAP ELEC SS 100uF 10V 20% CAP MPF 0.47uF 63V 5% CAP ELEC SS 0.47uF 50 20% CAP ELEC SS 47uF 16V 20% CAP ELEC SS 10uF 16V 20% CAP ELEC SS 2.2uF 50V 20% CAP ELEC SS 220uF 10V 20% CAP MPF 0.047uF 63V 5% CAP TRIMMER 20pF 20%
DIODES D4101-D4111	20-0000000-00-13	DIODE SW 4NS DO35 1N4148
INDUCTORS L4101 L4102	24-0569107-00-28 24-0220107-00-28	IND CHOKE 5.6uH 10% IND CHOKE 22uH 10%

<u>Reference No.</u>	<u>Part No.</u>	<u>Description</u>
DIN JACK M4101-M4108	34-4110300-00-60	DIN JACK 1 BLACK PCB MOUNT
TRANSISTORS Q4108,Q4116-Q4119,Q4136,Q4137, Q4140,Q4141,Q4151-Q4155 Q4113,Q4114,Q4121,Q4124,Q4125, Q4128,Q4130,Q4133,Q4142-Q4145 Q4115,Q4126,Q4127 Q4120,Q4123,Q4146,Q4147 Q4122,Q4131 Q4132	21-0100370-70-14 21-0000360-00-00 21-0000390-70-14 21-0000380-70-14 21-0000120-70-14 21-0000010-00-46	XTR SS PNP HFE 270-560 140MHz 2SA933AS XTR SS NPN HFE200-700 30MHz 2SC2878A XTR SS NPN HFE270-560 180MHz 2SC1740S XTR SS NPN HFE20 250MHz DTC-123ESA XTR SS NPN HFE 68 30MHz SPT DTC144ES XTR SS NPN HEF 100 200MHz TO-92 C1815Y
SLIDE SWITCH S4101	35-4102209-00-67	SW SLIDE 2P2T RIGHT L=9
ICs U4101 U4102,U4103	27-5574763-21-02 27-0140510-18-00	I.C. OSD DIP30SD LC74763-9012 I.C. SINGLE 8 CH ANALOG MUX/ DEMUX SMD M74HC4051MIR
CRYSTALS X4101 X4102	28-5143200-06-19 28-5177200-06-19	CRYSTAL 14.318MHz 30ppm HC-49S CRYSTAL 17.73447MHz 30ppm HC-49S
TRIGGER BOARD PCB ASSEMBLY	80-0907530-68-00	TRIGGER ASSEMBLY
DIODES D351,D352,D353 D354,D355,D357,D358,D3501,D3502	20-3251902-00-01 20-0000000-00-13	DIODE ZENER BZX55 5.1V 1/2W 5% DIODE SW 4NS DO35 1N4148
JACKS M351-M355,M357	34-4310300-00-60	PHONE JACK 1 BLACK PCB MOUNT 3.5mm
TRANSISTOR Q351	21-0000380-70-14	XTR SS NPN HFE20 250MHz DTC-123ESA
RESISTORS R358-R360	23-2121250-00-00	RES MO 120 OHM 5%
SLIDE SWITCH S351	35-4102209-00-67	SW SLIDE 2P2T RIGHT L=9
REGULATORS U3501 U352	27-3001201-17-14 27-3001201-07-85	I.C. VOLT REG 12V 1A NJM7812 I.C. VOLT REG 12V 0.1A LM78L12

<u>Reference No.</u>	<u>Part No.</u>	<u>Description</u>
<u>VIDEO-6 BOARD</u> <u>PCB ASSEMBLY</u>	80-0907530-45-00	VIDEO-6 BOARD
<u>CAPACITORS</u> C4401-C4403	22-3101022-00-43	CAP ELEC SS 100uF 16V 20%
<u>JACKS</u> M4401 M4404 M4403 M4402 J4401	34-4010000-01-60 34-4010100-01-60 34-4010200-01-60 34-4110300-00-60 34-4510302-01-80	RCA JACK 1 YELLOW PCB MOUNT RCA JACK 1 RED PCB MOUT RCA 1 WHITE PCB MOUNT DIN JACK 1 BLACK PCB MOUNT PHONE JACK D6.3 1 PCB MOUNT
<u>COMPOSITE VIDEO BOARD</u> <u>PCB ASSEMBLY</u>	80-0907530-66-00	COMPOSITE VIDEO ASSEMBLY
<u>CAPACITORS</u> C4201-C4203,C4205,C4207 C4204,C4206,C4208,C4214,C4220 C4211,C4225	22-3101022-00-43 22-3471022-00-28 22-3221012-00-43	CAP ELEC SS 100uF 16V 20% CAP ELEC GR 470uF 16V 20% CAP ELEC SS 220uF 10V 20%
<u>DIODES</u> D4201,D4202	20-0000000-00-13	DIODE SW 4NS DO35 1N4148
<u>RESISTORS</u> J4201,J4202	44-0000027-11-00	RES SMD 0 OHM 5% 1/10W 0805
<u>RCA JACKS</u> M4201,M4202	34-4040020-00-60	RCA JACK 4 Y-Y/Y-Y PCB MOUNT
<u>TRANSISTORS</u> Q4201,Q4202 Q4203,Q4204 Q4207,Q4210,Q4501-Q4503	21-0000360-00-00 21-0000380-70-14 21-0100370-70-14	XTR SS NPN HFE200-700 30MHz 2SC2878A XTR SS NPN HFE20 250MHz DTC-123ESA XTR SS PNP HFE 270-560 140MHz 2SA933AS
<u>ICs</u> U4201	27-0140510-18-00	I.C. SINGLE 8 CH ANALOG MUX/DEMUX SMD M74HC4051MIR

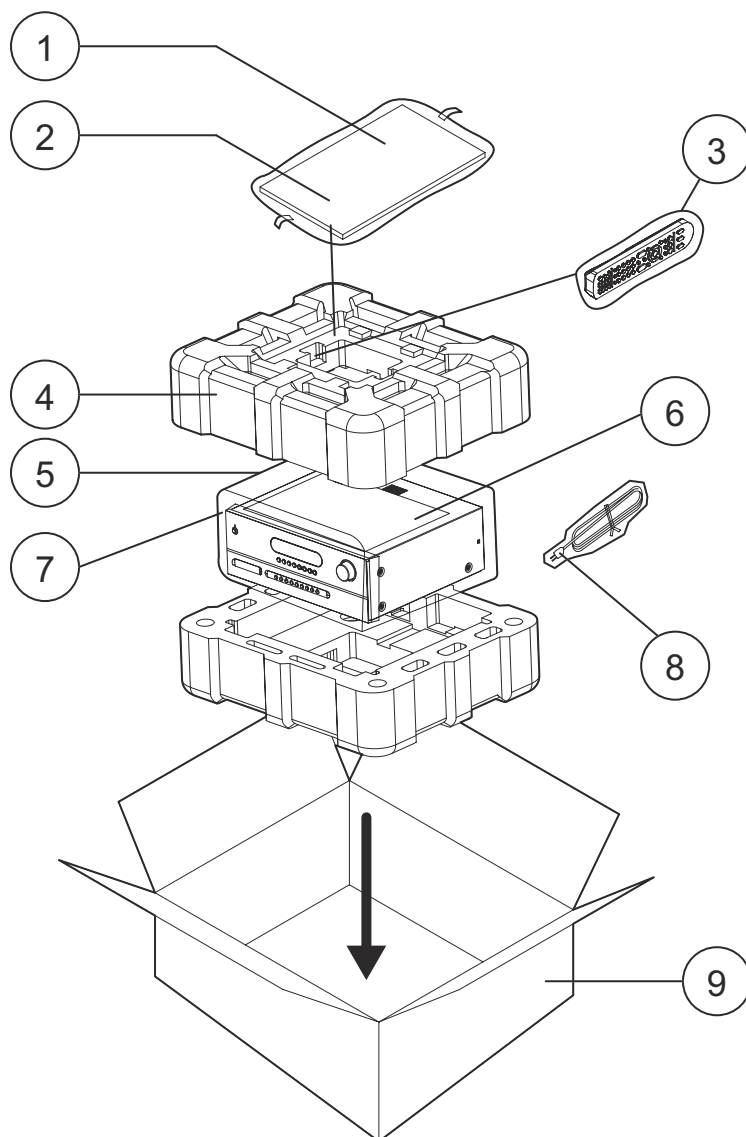
NOTE: THE COMPONENTS IDENTIFIED BY ⚠ MARK ARE CRITICAL FOR RISK OF FIRE AND ELECTRICAL SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.



<*AH > : USA, CANADIAN MODEL ONLY.

<*C > : EUROPEAN MODEL ONLY.

RESISTORS: MO-METAL OXIDE, RN-CERAMIC CASE, MF-METAL FILM.

PACKING DIAGRAM & PARTS LIST



Item	Part No.	Description	Qty.
1	64-0200001-01-00	POLYBAG MANUAL	1
2	31-6407520-00-98	FM WIRE ANTENNA	1
	31-6472801-00-28	AM LOOP ANTENNA W/STAND	1
	34-0081004-00-67	300 TO 75 OHM ADAPTER	1
	37-0240300-00-81	LITHIUM BUTTON CELL CR2025	1
	61-0753004-40-99	OWNERIS MANUAL T753 GB/F/D/NL	1
	61-0753004-41-99	OWNERIS MANUAL T753 E/I/P/S	1
	83-0762000-00-04	REMOTE CONTROLLER NAD ZR-2	1
	37-0020200-00-79	BATTERY AAA 1.5V ER03X	4
	65-0752000-00-98	WARRANTY CARD	1
3	83-0752000-01-04	REMOTE CONTROLLER NAD HTR-2	1
4	63-0763001-00-01	POLYFOAM TOP / BOTTOM	2
5	64-0762001-00-00	POLYBAG MAIN UNIT	1
6	65-0752070-00-99	A3 WHITE PAPER	1
7	64-0762000-00-00	EPE PROTECTIVE COVER	1
8 *AH 	36-2881010-07-97	POWER CORD 110V 3PINS 15A/125V UL/CSA	1
*C 	36-2983110-07-97	POWER CORD CE 3 PINS 10A/16A 250V	1
9	67-0753000-10-99	MASTER CARTON BOX T753	1

VERSION HISTORY

SERIAL NUMBER	SOFTWARE VER.	PCB ASSEMBLY VERSION
R39T75300001-R39T75300500	V1.27	ALL ARE ISSUE 3
R3YT75300501-R3YT75301500	V1.27	ONLY KEYBOARD/LED/S-VIDEO/DIGITAL/ COMPOSITE/POWER SUPPLY/POWER AMP BOARDS ISSUE 3, ALL OTHER ISSUE 4.
R3YT75301501-R3YT75302100	V1.27	ONLY MAIN/TRIGEER/VD6/SPEAKER/ POWER SWITCH BOARDS ISSUE 5, ALL OTHER ISSUE 4.
R3YT75302101-R3YT75303100	V1.27	ONLY KEYBOARD/LED/S-VIDEO/DIGITAL/ COMPOSITE/POWER SUPPLY/POWER AMP BOARDS ISSUE 3, ALL OTHER ISSUE 4.
R3YT75303101-R3YT75304100	V1.27	ONLY MAIN/TRIGEER/VD6/SPEAKER/ POWER SWITCH BOARDS ISSUE 5, ALL OTHER ISSUE 4.
R3YT75304101-R3YT75306036	V1.27	ONLY MAIN/TRIGEER/VD6/SPEAKER/ POWER SWITCH BOARDS ISSUE 5, ALL OTHER ISSUE 4.

REMARK: PCB Number 55-0753XXX-XX-00 = ISSUE 3,
PCB Number 55-0753XXX-XX-01 = ISSUE 4,
PCB Number 55-0753XXX-XX-02 = ISSUE 5,
PCB Number 55-0753XXX-XX-03 = ISSUE 6.

SERVICE MANUAL

T 753

Surround Sound Receiver